"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610008-5

SILIN, N.A.; KOBERNIK, S.G.; ASAULENKO, I.A.

Investigation of the operation of the 1000-80 hydraulic pipe-line dredge and the 900 millimeter diameter spoil pipe. Izv. Inst. gidrol. i gidr. AN URSR no.14:54-65 '56. (MLRA 9:12)

(Dredging machinery)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610008-5"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610008-5

SILIN, M.O.; KOBERNIK, S.G.

Determination of the motion parameters of a water-earth mixture in pressure pipes. Dop. AN URSR no.2:141-144 '57. (MLRA 10:5)

1. Institut gidrologii ta gidrotekhniki AN URSR. Predstaviv akademik AN URSR G.I. Sukhomel.
(Hydrodynamics)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610008-5"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610008-5

SOV/21-58-2-14/28

AUTHORS: Silin, N.A., Kobernik, S.G. and Asaulenko, I.A.

TITLE: Head Losses During the Motion of Water and Water-Solid Mixture in Large Diameter Conduits (Poteri napora pri dvizhenii vody i vodogruntovoy smesi v truboprovodakh bol'shikh diametrov)

PERIODICAL: Dopovidi Akademii nauk Ukrains'koi RSR, 1958, Nr 2, pp 175-177 (USSR)

ABSTRACT: The authors present the results of investigations conducted from 1954 to 1956 to determine head losses in large-diameter conduits. The investigations were carried out on pressure conduits of the earth suction dredges, which delivered water-solid mixture into the earth dams of the Kakhovka and Kremenchug Hydroelectric Power Plants. The pipes were of the following diameters: 900, 800 and 614 mm. The authors present numerical data in tabulated form and in graphical form as curves expressing the values of head losses plotted versus the velocity, the diameters of the conduits and the specific weight of the water-solid mixture. There are 4

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SOV/21-58-2-14/28

Head Losses During the Motion of Water and Water-Solid Mixture in Large Diameter Conduits

graphs, 1 table and 5 Soviet reverences.

ASSOCIATION: Institut gidrologii i gidrotekhniki AN UkrSSR (Institute of Hydrology and Hydraulic Engineering of the AS UkrSSR)

PRESENTED: By Member of the AS UkrSSR, G.I. Sukhomel

SUBMITTED: May 16, 1957

NOTE: Russian title and Russian names of individuals and institutions appearing in this article have been used in the transliteration

Card 2/2

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610008-5"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610008-5

10(4) SOV/98-59-7-21/22
AUTHOR: Soznov, S.T., Chairman
TITLE: Conference on Scientific Research in the Field of Hydromechanics
PERIODICAL: Gidrotekhnicheskoye stroitel'stvo, 1959, Nr 7, pp 62-65 (USSR)

didate of Technical Sciences (VNIIG) and Engineer N.A. Khrustalev Ferro-Concrete (VNII); "the Hydraulic Fractionation of Natural Sand in the Preparation of Concrete." At the session on equipment the following papers were read: Engineer I.V. Shkundin (Gidroproyekt); "Special-purpose Earth Detonators"; Engineer, V.A. Kanz (Planning and Design Office of the Hydromechanization Trust of the Ministry of the USSR); "New Designs of Bucket-Motor Types of Dismegration Equipment"; I.A. Korianin, Candidate of Technical Sciences (IGD at the Academy of Sciences of the USSR), Engineer P.I. Inakov (the Lead-Mining Trust), and M.M. Zhurba, Candidate of Technical Sciences (DOSUGI); "The Design of Feeders for the Loading of Heavy Materials into Pressurized Water Conduits"; the session on transport contained papers read by the following: I.V. Belyakov, member of the Academy of Sciences of the Armenian SSR; "The Movement of Alluvia and Related Problems"; Prof. M.A. Mkrtchyan, Doctor of Technical Sciences (VNII imeni B.Ye.Vedeneyev), A.I. Asaryan, and S.G. Samoyan, Candidate of Technical Sciences (the Institute of Energetics of the Academy of Sciences of the Armenian SSR); "The Kinematics of Turbulent Streams"; Prof. P. I. Frankl' Doctor of Technical Sciences (Kharkhov Polytechnical State University); M.A. Velikanov, corresponding Member of the Academy of Sciences of the USSR; "The Theoretical and Practical Value of the Gravitational Theory of Alluvia"; I.A. Sirin, Candidate of Technical Sciences; "Loss of Pressure and Hydraulic Resistance in Large-Diameter Tubes"; A.V. Klimentov, Candidate of Technical Sciences (VNIIG), K.P. Zrelov (TOTSOD), and S.A. Korchagov (IGD of Academy of Sciences of the USSR); "Experiments in Water Supply in Conduit Tubes of Various Diameters"; V.S. Znovar, Candidate of Technical Sciences: "Resistance in Rough Open Riverbeds."

Card 4/6

Card 5/6

ASSOCIATION: (Conference Organizing Committee) Orgkomitet po provedeniyu soveshchaniya

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610008-5"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610008-5

SILIN, N.A. [Silin, M.O.], kand.tekhn.nauk; KOBERNIK, S.G. [Kobernik, S.H.], inzh.

Measuring the discharge of a water-soil mixture with Venturi tubes. Visti Inst.gidrol.i gidr.AN URSR 18:68-75 '61. (MIRA 15:3)
(Venture tubes) (Hydraulic conveying)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610008-5"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610008-5

SILIN, Nikolay Aleksandrovich; KOBERNIK, Semen Grigor'yevich. Prinimal uchastiye KARASIK, V.M.; PISHCHENKO, I.A , kand. tekhn. nauk, otv. red.; LABINOVA, N.M., red.; DAKHNO, Yu.B., tekhn. red.

[Operating conditions of large dredgers and pipelines]Rezhimy raboty krupnykh zemlenosnykh snariadov i truboprovodov. Kiev, Izd-vo AN USSR, 1962. 214 p. (MIRA 16:3)
(Hydraulic conveying) (Dredging machinery)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610008-5"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610008-5

SILIN, M.O.; PISHCHENKO, I.A.

Device for measuring vertical pulsation speeds in pressure pipelines during the movement of currents carrying suspended particles. Visti Inst.hidrol. i hidr. AN URSR 21:88-93 '62. (MIRA 16:4)
(Pipe--Hydrodynamics) (Hydraulic conveying)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610008-5"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610008-5

SILIN, M.O.; PISHCHENKO, I.A.

Device for measuring pressure fluctuations on the walls of a pipeline during the movement of a current carrying suspended particles. Visti Inst.hidrol. i hidr. AN URSR 21:94-97 '62. (MIRA 16:4)
(Pipe—Hydrodynamics) (Hydraulic conveying)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610008-5"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610008-5

SILIN, Nikolay Aleksandrovich; PISHCHENKO, Ivan Akimovich; DIMINSKIY, Karol' Viktorovich; KONDAKOV, Vyacheslav Nikolayevich; STOVBUN, Ivan Iosifovich; ROZOVSKIY, Izrail' L'vovich, doktor tekhn. nauk, otv. red.; MEL'NIK, T.S., red.; TURBANOVA, N.A., tekhn. red.

[Instruments for measuring parameters of hydraulic conveying of solid materials] Pribory dlia izmereniia parametrov gidrotransportirovaniia tverdykh materialov. [By] N.A.Silin i dr. Kiev, Izd-vo AN USSR, 1963. 197 p. (MIRA 17:3)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610008-5"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610008-5

[illegible], M.O.

[illegible] particles on the kinematic structure of pressure [illegible] of high concentration of suspensions. Dop. AN UKSR no.7: [illegible] (MIRA 17:9)

[illegible] gidrologii i gidrotekhniki AN UkrSSR. Predstavlena [illegible] AN UkrSSR G.I.Sukhomelom [Sukhomel, H.I.].

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610008-5"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610008-5

SILIN, N.A. [Silin, M.O.]

Determination of hydraulic resistances in pipelines and their relation to the velocity structure of suspension-carrying streams. Dop. AN URSR no.8:1032-1034 '64. (MIRA 17:8)

1. Institut gidrologii i gidrotekhniki AN UkrSSR. Predstavleno akademikom AN UkrSSR G.I. Sukhomelom [Sukhomel, H.I.]

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610008-5"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610008-5

SILIN, Nikolay Aleksandrovich; VITOSHKIN, Yuriy Konstantinovich; KARASIK, V.M., kand. tekhn. nauk, otv. red.; PILATOVA, T.A., red.

[Hydraulic conveying of coal in pipes and methods of its calculation] Gidrotransport uglia po trubam i metody ego rascheta. Kiev, Izd-vo AN USSR, 1962. 84 p.
(MIRA 15:12)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610008-5"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610008-5

DIDKOVSKIY, M.K., kand. tekhn. nauk, otv. red.; DYATLOVITSKIY, L.I., doktor tekhn. nauk, red.; ROZOVSKIY, I.L., doktor tekhn. nauk, zam. otv. red.; NIKITIN, I.K., kand. tekhn. nauk, red.; PYSHKIN, B.A., red.; SILIN, K.A., kand. tekhn nauk, red.; SUKHOMEL, G.I., akademik, red.; SHIEPANEK, Z.I., kand. tekhn. nauk, red.; GILELAKH, V.I., red.

[Hydraulic engineering and fluid mechanics] Gidrotekhnika i gidromekhanika. Kiev, Naukova dumka, 1964. 217 p. (MIRA 17:12)

1. Akademiya nauk URSR, Kiev. Instytut hidromekhaniky. 2. Chlen-korrespondent AN Ukr.SSR (for Pyshkin). 3. AN Ukr.SSR (for Sukhomel).

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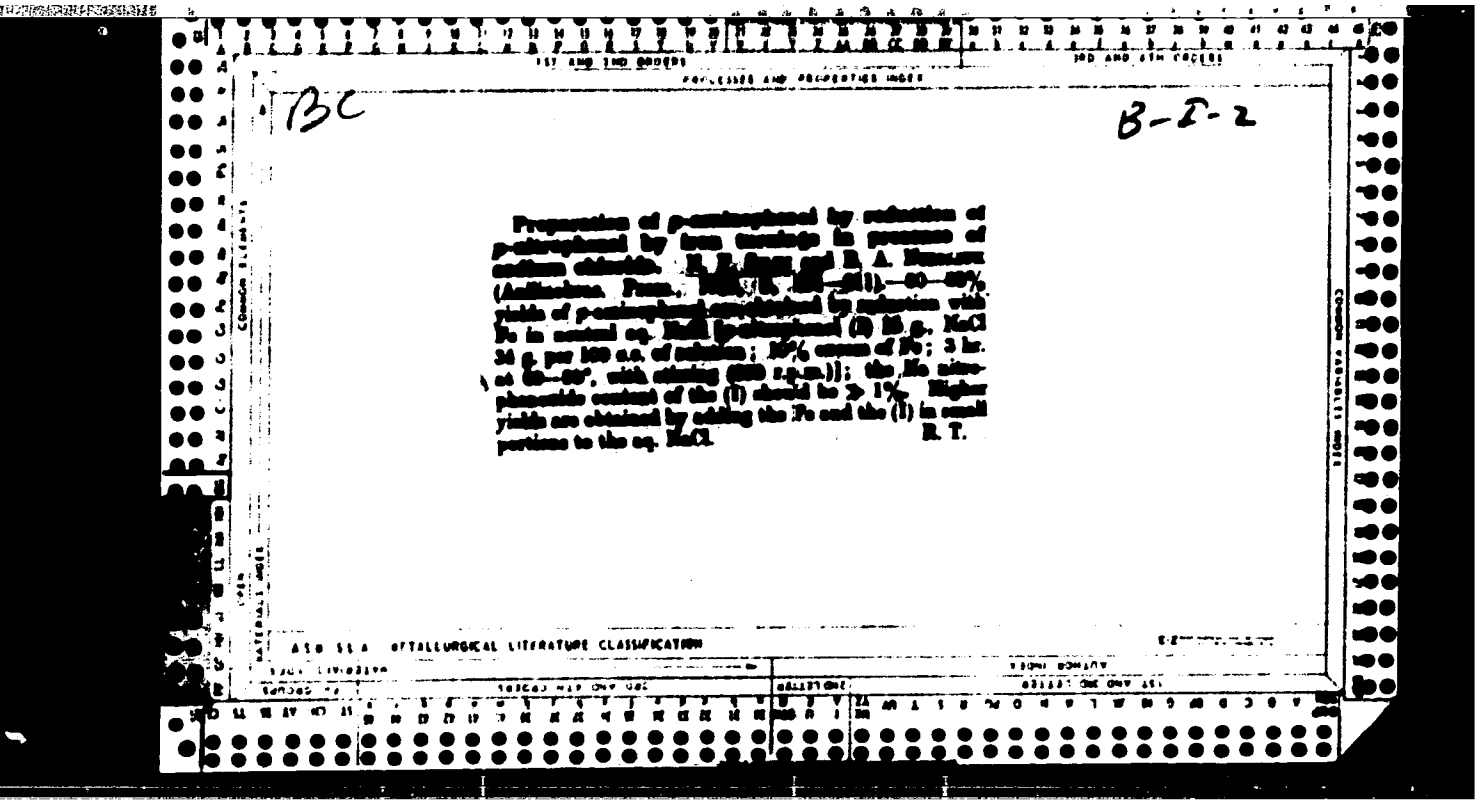

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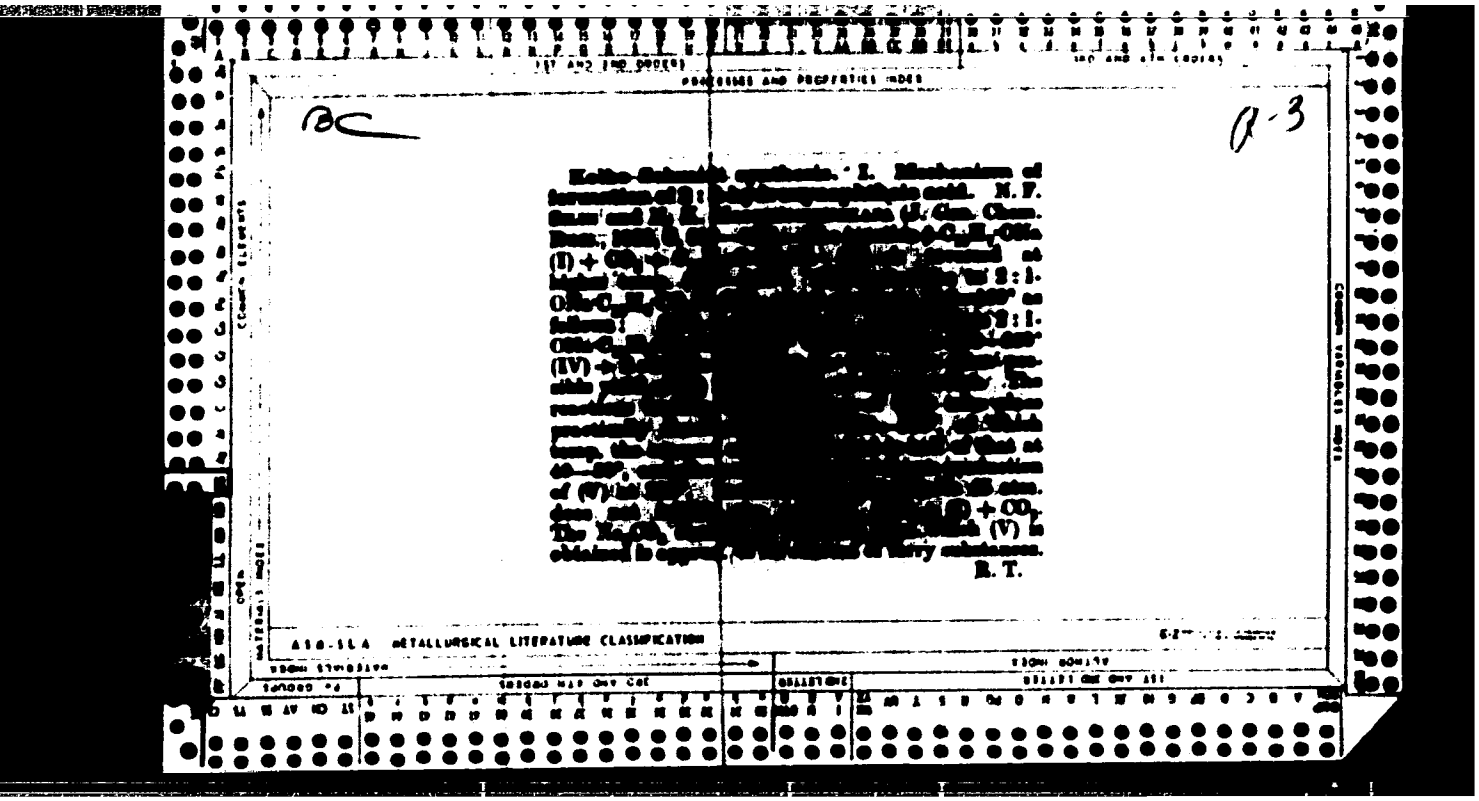

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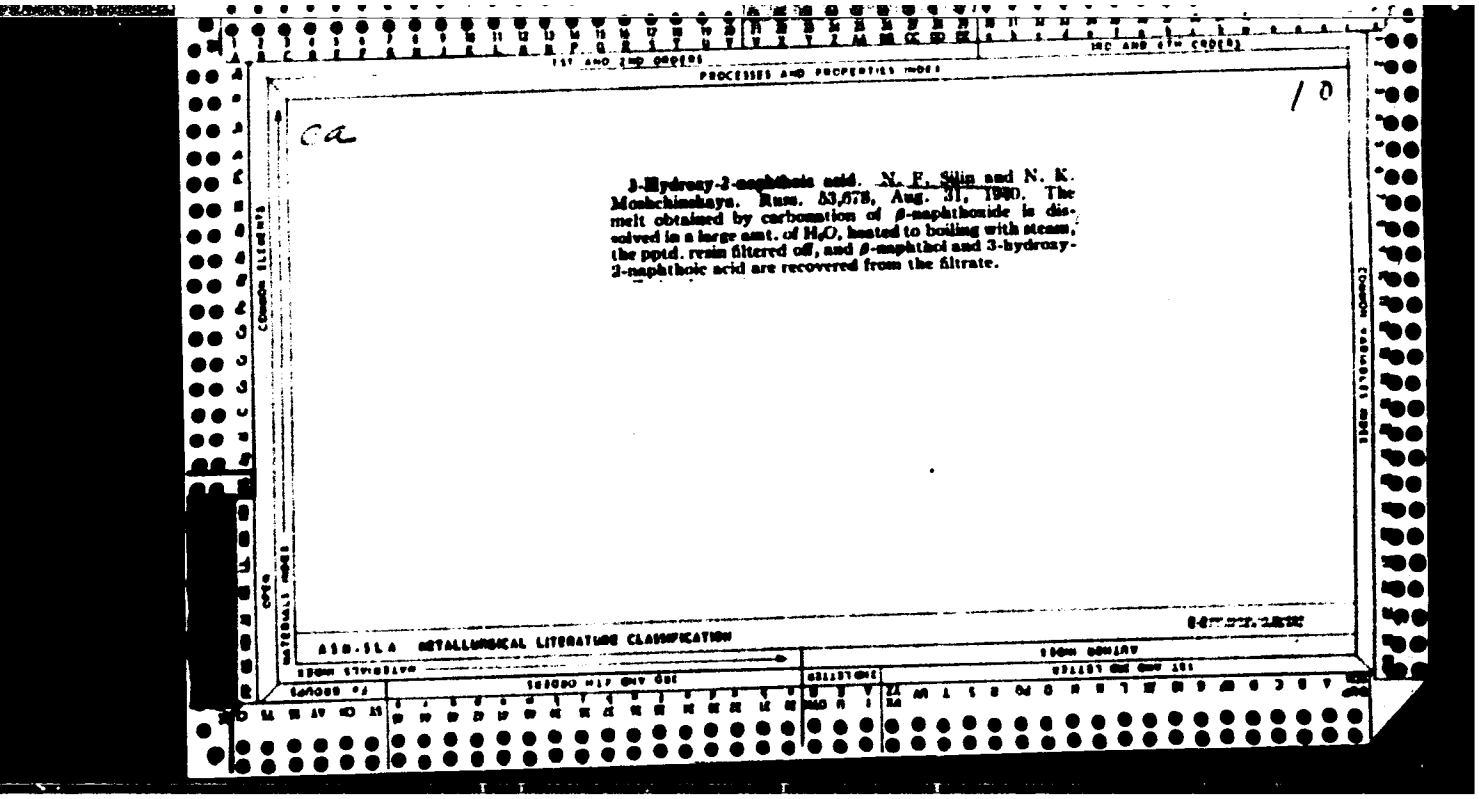


Ca

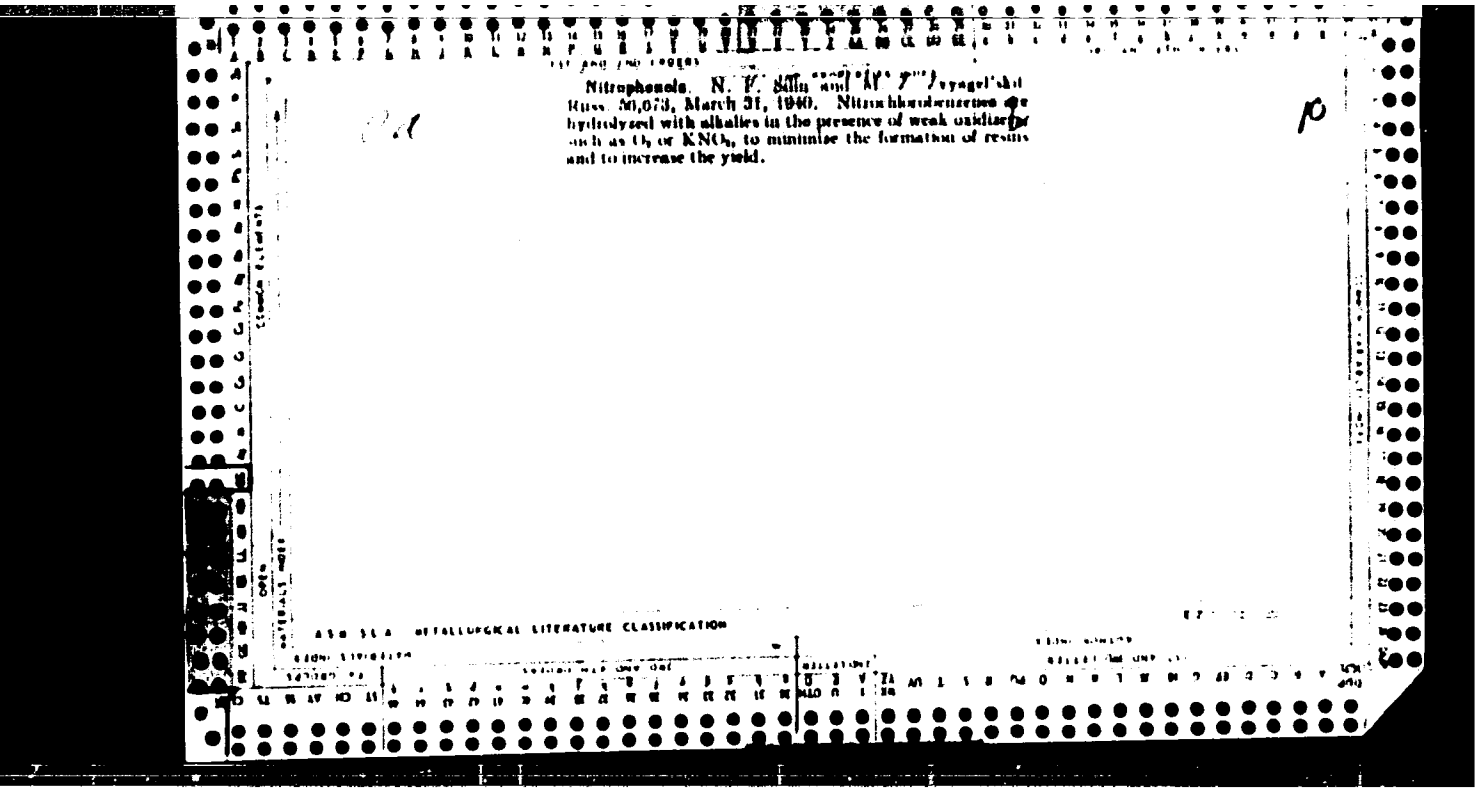
/ 0

3-Hydroxy-2-naphthoic acid. N. F. Silin and N. K. Moshchinskaya. Russ. 53,678, Aug. 31, 1940. The melt obtained by carbonation of β-naphthoxide is dissolved in a large amt. of H_2O, heated to boiling with steam, the pptd. resin filtered off, and β-naphthol and 3-hydroxy-2-naphthoic acid are recovered from the filtrate.

A10-51A METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610008-5"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610008-5



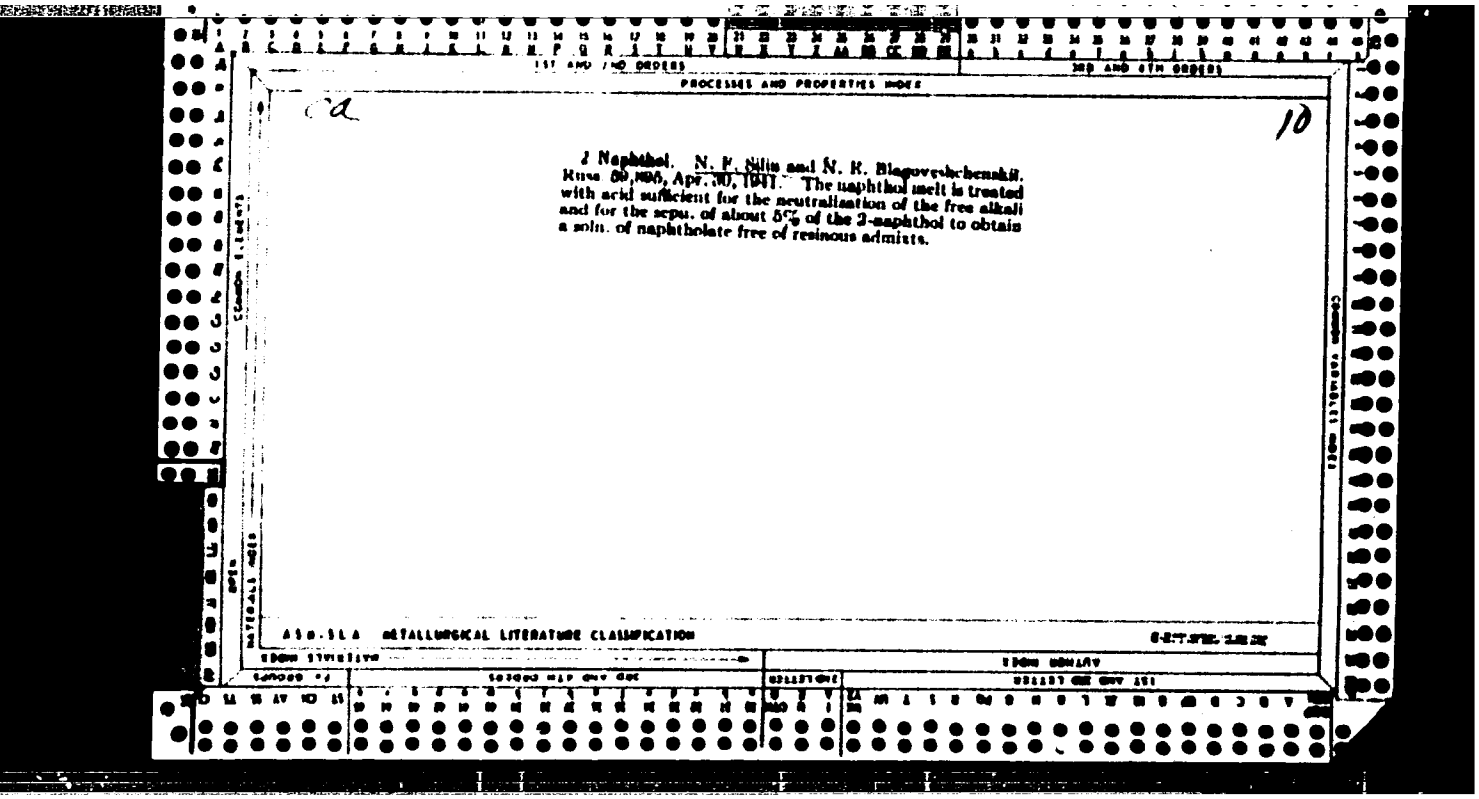
1ST AND 2ND ORDERS

Nitrophenols. N. F. Salin and M. [illegible] Zvyagel'skii. Russ. 50,073, March 31, 1940. Nitrochlorobenzenes are hydrolyzed with alkalies in the presence of weak oxidizers such as O_2 or KNO_3, to minimize the formation of resins and to increase the yield.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610008-5"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610008-5



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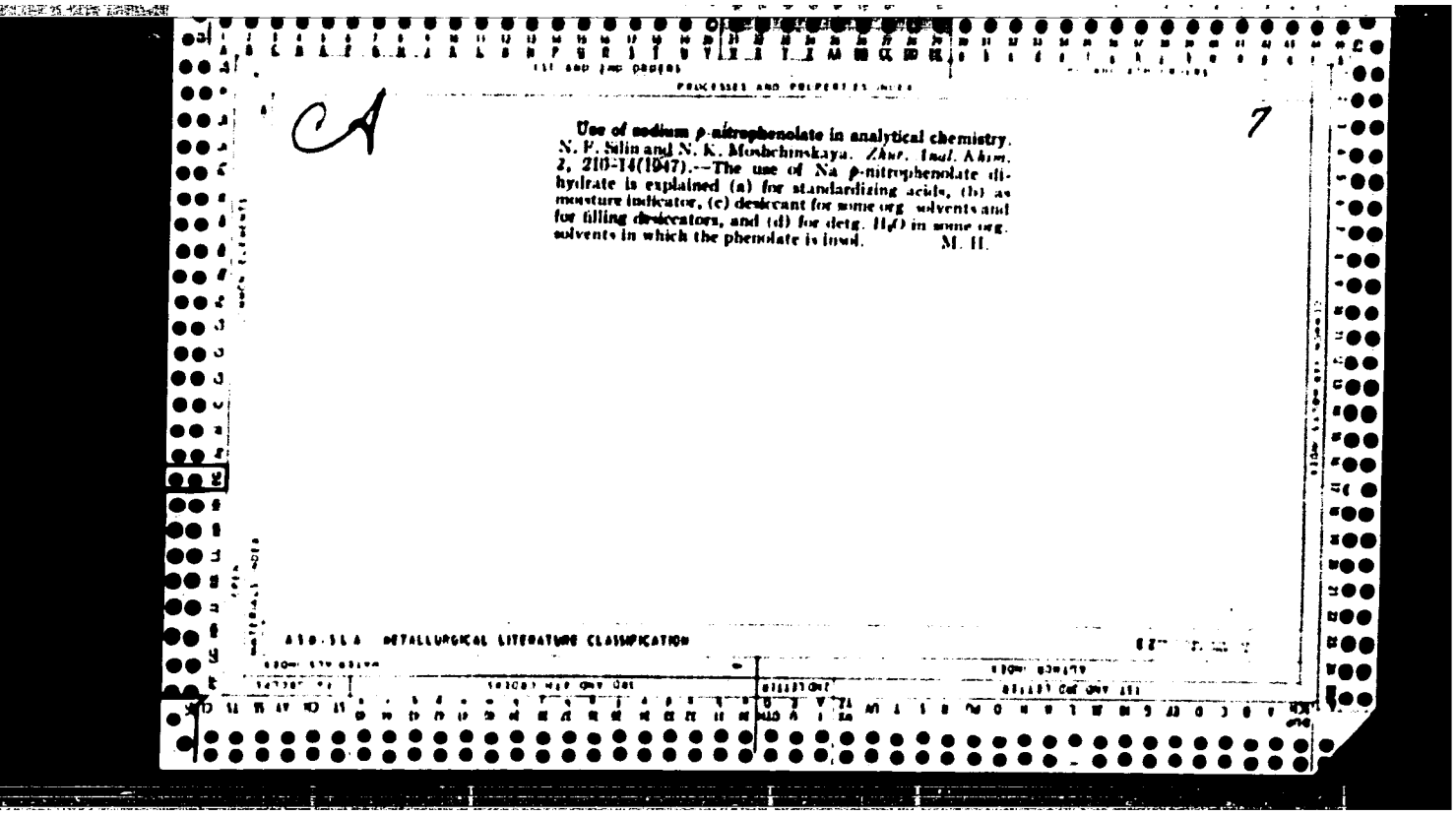

CA

7

Use of sodium *p*-nitrophenolate in analytical chemistry. N. P. Silin and N. K. Moshchinskaya. *Zhur. Anal. Khim.* 2, 210-14(1947).—The use of Na *p*-nitrophenolate dihydrate is explained (a) for standardizing acids, (b) as moisture indicator, (c) desiccant for some org. solvents and for filling desiccators, and (d) for detg. H_2O in some org. solvents in which the phenolate is insol. M. H.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610008-5

SIDI , . F. Cand Chem Sci

Dissertation: "Investigation of the Process for Obtaining 1,3-Naphthalocarboxylic acid" 12/2/50

Moscow Order of Lenin Chemical-Technological Inst imeni D. I. Mendeleyev

SO Vechernyaya Moskva
Sum 71

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610008-5"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610008-5

MOSHCHINSKAYA, N. K.; SILIN, N. F.; DMITRENKO, Ye. Ye.; LIBERZON, V. A.; LOKSHIN, G. B.; KORCHAGINA, A. M.; Prinimali uchastiye: ZAL'TSMANOVICH, T. A.; MAMEDOV, A. A.; SAPSOVICH, L. V.; SOKOLENKO, V., student; ZEMLYANSKAYA, L., studentka

Preparation of aromatic dicarboxylic acids and their chlorides. Neftekhimia 2 no.4:541-549 Jl-Ag '62. (MIRA 15:10)

1. Dnepropetrovskiy khimiko-tekhnologicheskiy institut imeni F. E. Dzerzhinskogo.

(Acids, Organic) (Chlorides)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610008-5"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610008-5

S/080/60/033/010/022/029
D216/D306

AUTHORS: Kretov, A.Ye., Silin, N.F., Korchagina, A.M., Lokshin, G.B., and Kivaina, S.N.

TITLE: The synthesis of terephthalic acid by chloromethylation of the products of aromatic hydrocarbons

PERIODICAL: Zhurnal prikladnoy khimii, v. 33, no. 10, 1960, 2329 - 2335

TEXT: The authors studied the synthesis of terephthalic acid from p-xylene and its homologues by chloromethylation. This chloromethylation is widely used in organic synthesis, being a typical electrophilic substitution reaction along following scheme:

$CH_2O + HCl \rightarrow CH_2OH + Cl^-$, $ArH + CH_2OH + Cl^- \rightarrow ArCH_2OH + HCl$,

$ArCH_2OH + HCl \rightarrow ArCH_2Cl + H_2O$.

The authors, by increasing the temperature of the reaction by 20°C, (to 70-75°C) achieved the cut in synthesis time to 12 hours while

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S/080/60/033/010/022/029
D216/D306

The synthesis of ...

still retaining the yields of I. Nazarov and A. Semenovskiy (Ref. 3: DAN SSSR, 12, 143?, 1956). The increase in yield of isomeric xylolchlorides was obtained by changing the proportions of toluene and formaldehyde. The optimum yield of 82.5 % was obtained with the formaldehyde content of 95 % of toluene giving a molar proportion of toluene and formaldehyde of 2:1 (formaldehyde was used in form of 40 % formalin). On the chloromethylation of ethyl benzene at 70-75°C for 25 hours a maximum yield of ethyl benzyl chloride of 90 % (on ethyl benzene used) was obtained with a proportion 1:1 of ethyl benzene-formaldehyde. The optimum yield of iso-propylbenzyl chloride was 80 % on the cumene used and with a proportion of cumene:formaldehyde of 3:1, temperature 70-75°C, time 25 hours. The authors studied the oxidation of isomeric xylolchlorides with dilute (10 %) nitric acid with an optimum yield of toluic acids, of 89 % for periods of 17-18 hours. Later, in connection with the discovery of nitroproducts, the concentration of acid was cut down to 7-5 % and the time to 12-10 hours. The yield obtained was 85 %. On oxidation of iso-propyl benzyl chloride, besides iso-propyl benzoic acid, whose yield was up to 80 %, 20 % of a product was obtained which

Card 2/4

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S/080/60/033/010/022/029
D216/D306

The synthesis of ...

was insoluble in a soda solution and which seemed to be a tertiary alcohol. The fractional precipitation of toluic acids was also used as a means of separation, by removing HCl from the solutions of sodium salts. p-toluic acid was obtained with a yield of [illegible] % and melting point [illegible] - 178°C, p-toluic acid with a yield [illegible] % and a melting point [illegible] - 99°C. Dicarbonic acids were also obtained with high melting points and a yield of [illegible] %. Technical literature gives various methods of esterification of terephthalic acid, but the authors obtained dimethyl terephthalate by esterification of the acid with a large excess of methanol (48 mls. to 4 g. of acid) and in the presence of concentrated sulphuric acid. This product proved unsuitable for transesterification. Esterification of dicarbonic acids in the presence of hydrogen chloride yielded [illegible] % of dimethylterephthalate which did not darken on heating to [illegible] °C. Further purification was achieved by double distillation under CO_2. The product obtained gave a melting point of 141°C, which agrees with the required standard. There are 4 tables, 1 figure and [illegible] references: 6 Soviet-bloc and 26 non-Soviet-bloc.

Card 4/4

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610008-5

S/080/60/033/010/022/029
D216/D306

The synthesis of ...

The 4 most recent references to the English-language publications read as follows: Chem. Trade J., 143, 3717, 504, 1958; J. Bengstrom, J. Org. Chem., 23, 212, 1958; Khasim bin Ono Knagakhama, Annest. J. Chem. Soc. Japan (Ind.) 59, 1196, 1956; Am. pat 2766280 1956.

SUBMITTED: March 25, 1960

Card 4/4

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610008-5"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610008-5

KRETOV, A.Ye.; SILIN, N.F.; BARANOVA, Ye.I.; LOKSHIN, G.B.

Production of terephthalic acid from commercial diethylbenzene.
Zhur.prikl.khim. 35 no.4:863-866 Ap '62. (MIRA 15:4)
(Terephthalic acid) (Benzene)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610008-5"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610008-5

SILIN, N.M.

Using the EPP-9 potentiometer in complement with the ER-3 regulator. Priborostroenie no.4:23 Ap '62. (MIRA 15:4)
(Potentiometer)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610008-5"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610008-5

SOV/32-25-3-53/62

8(2)
AUTHORS: Mayranovskiy, S. G., Silin, N. N.

TITLE: The Use of a Potentiometer for Polarographic Investigations (Primeneniye potentsiometra dlya polyarograficheskikh issledovaniy)

PERIODICAL: Zavodskaya Laboratoriya, 1959, Vol 25, Nr 3, pp 376-377 (USSR)

ABSTRACT: On numerous occasions it is necessary to determine the exact relationship between current intensity and the electrode potential in the case of multi-stage polarograms. The potential of the dropping electrode is measured by means of potentiometers with reference to a testing electrode. A simple method is described by means of which it is rendered possible to increase the measuring range of the most often used potentiometers of the P-4 type. With the help of the new wiring pattern (Fig 1) the measuring range of the potentiometer is trebled so that it becomes also necessary to equip the rheochord as well as the commutator with a new scale. It was observed that in polarizing the dropping electrode it is more advantageous to use a polarograph with a voltage divider rather than a polarograph alone. An apparatus combining both

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610008-5

The Use of a Potentiometer for Polarographic Investigations

features, i.e. voltage divider combined with a potentiometer is in the present case called a "polaropotentiometer". Apparatus of this kind were built by Ye. M. Vasin and Yu. F. Til'. The sketch of a voltage divider (Fig 2) with a description is given, and a few design instructions for such an apparatus are added. There are 2 figures.

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR
(Institute of Organic Chemistry imeni N. D. Zelinskiy of the Academy of Sciences, USSR)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610008-5"

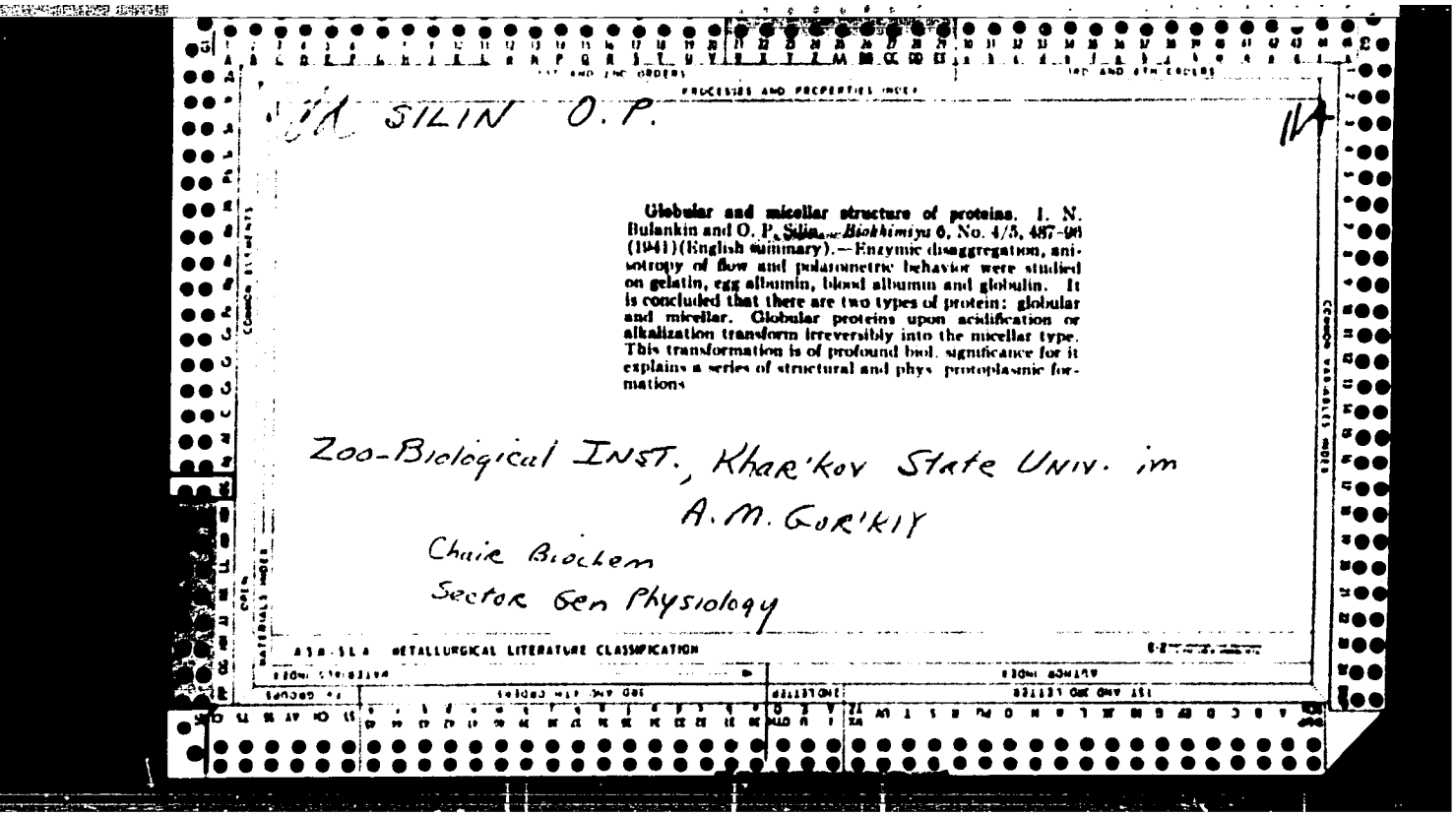
"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610008-5

RUSAKOVSKIY, M. [Rusakovs'kyi, M.], arkhitektor, SILIN, O. [Sylin, O.] inzh.

Rowhouses for southern regions of the Ukraine. Proek. i bud. 1 no.1:40-44 0 '59. (MIRA 13:12)
(Ukraine--Apartment houses)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610008-5"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610008-5



SILIN O. P.

Globular and micellar structure of proteins. I. N. Bulankin and O. P. Silin. *Biokhimiya* 6, No. 4/5, 487–98 (1941)(English summary).—Enzymic disaggregation, anisotropy of flow and polarometric behavior were studied on gelatin, egg albumin, blood albumin and globulin. It is concluded that there are two types of protein: globular and micellar. Globular proteins upon acidification or alkalization transform irreversibly into the micellar type. This transformation is of profound biol. significance for it explains a series of structural and phys. protoplasmic formations

Zoo-Biological Inst., Khar'kov State Univ. im A. M. Gor'kiy

Chair Biochem

Sector Gen Physiology

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SILIN, O.P.

Age characteristics of fasting metabolism. Uch.zap. KHGU 53:215-229 '54. (MIRA 11:11)

1. Otdel obshchey fiziologii nauchno-issledovatel'skogo instituta biologii i kafedra biokhimii Khar'kovskogo gosudarstvennogo universiteta imeni A.M. Gor'kogo.
(AGE) (STARVATION)

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SILIN, O.P.

Age-induced disorders in oxidative phosphorylation. Uch.zap.KHGU 68 :51-57 '56 (MIRA 11:11)

1.Nauchno-issledovatel'skiy institut biologii Khar'kovskogo ordena trudovogo krasnogo znamei gosudarstvennogo universiteta imeni A.M. Gor'kogo.

(AGE) (PHOSPHORYLATION)

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T

USSR/Human and Animal Physiology. Neuromuscular Physiology.

Abs Jour: Ref Zhur-Biol., No 8, 1958, 36814.

Author : Nikitin, V.N., Golubitskaya, R.I., Silin, O.I.
Likhushina, L.G., Blok, L.N.

Inst : Kharkov University.

Title : Changes in Biochemistry of Denervated Organs Occuring During Growth Periods. I. Changes of Some Biochemical Indices of Striated Muscles Following Denervation and Tenotomy During Growth.

Orig Pub: Uch. Zap. Kharkovsk un-t. 1956, 68, 79-99.

Abstract: Experiments were carried out on rats aged 1.4 months to 1.4 years. On the 21st day following removal of the Achilles tendon a decrease was noted in the muscles of the foot of the ATP, creatinephosphate, glycogen, acid soluble P, Lipoid P.P. PNC and DNC

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Silin, O P

U.S.S.R. / Human and Animal Physiology. Liver. T

Abs Jour: Ref Zhur-Biol., No 5, 1958, 22290.

Author : Nikitin, V. N., Golubitskaya, R. I., Silin, O P, Stovitskaya, L. P.

Inst : Univ. of Kharkov.

Title : Quantitative Biochemical Changes in Denervated Organs. (II). Quantitative Changes of Some Biochemical Liver Factors Following Denervation.

Orig Pub: Uch. zap. Kharkovska. Un-t, 1956, 68, 101-116.

Abstract: The liver of rats 1-3 months and 1-2 yrs. old was denervated by section of both vagus nerves and excision of the solar plexus. Animals, which only underwent laparatomy, served as controls. Twenty days post-operatively, it was noted that the weight of all the rats decreased more markedly in the animals one month, one and

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SILIN, O P

4-9-8/25

AUTHOR: Popovskiy, Mark

TITLE: Secrets of Youth and Aging (Tayny molodosti i stareniya)

PERIODICAL: Znaniye - Sila, 1957, # 9, pp 18-19 (USSR)

ABSTRACT: The article deals with the work performed by the Khar'kov Institute of Biology. The present Director Vladimir Nikolayevich Nikitin associate member of the USSR Academy of Sciences, successor to Professor A. Nagornyy, associate member of the USSR Academy of Sciences, pointed out that the Khar'kov Institute is developing a method of scientific cooperation between physiology and biochemistry. The laboratories contain as well physiological as biochemical apparatus. The pupils of A. Nagornyy are studying the organism in general and metabolism in particular.

For research work the Institute keeps 2,000 rats of different age. The Soviet scientists are using a method, discovered by the American scientist Mac Kay (Mak-Key), who found that if rats are getting less food, this retards their growth radically, but doubles the duration of their lives. The Institute scientists did not only repeat these experiments, but improved the method considerably. Supervised by Professor Nikitin, the scientists study the tissues and cells of underfed animals and the inner biochemical changes evoked by hunger.

Card 1/2

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Secrets of Youth and Aging 4-9-8/25

The biochemical research is directed by the full member of the Unkrainian Academy of Sciences Professor Bulankin. The biochemical studies try to determine the synthesis of albumen in different ages. Another task is to find out the rate of albumen formation of young and old animals.

The senior scientist of the Institute, Oleg Petrovich Silin, carries out tests with radioactive materials (sulfur isotopes) to determine the different albumen synthesis of young and old animals.

But the task of the biochemists is not limited with the description of albumen changes by ages, it is more important to ascertain the source of these changes.

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MAKHIN'KO, Vladimir Ivanovich,; SILIN, O.P.,dots., otv. red.; PROKOPENKO, M.I.,red.; CHERNYSHENKO, Ya.T., tekhn. red.

[Subject and problems of the physiology of higher nervous activity; an introduction to a course in the physiology of higher nervous activity] Predmet i zadachi fiziologii vysshei nervnoi deiatel'nosti; vvedenie k kursu fiziologii vysshei nervnoi deiatel'nosti. Khar'kov, Izd-vo Khar'kovskogo gos. univ. im. A.M.Gor'kogo, 1958. 91 p. (MIRA 11:12)
(NERVOUS SYSTEM)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610008-5"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610008-5

NIKITIN, V.N.; SILIN, O.P.; MOROZ, Yu.A.

Sulfur-containing amino acids in liver and muscle proteins of white rats of various age. Uzh. zap KHGU 108:49-51 '60.
(MIRA 14:3)

(AMINO ACID METABOLISM) (AGE) (SULFUR IN THE BODY)

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SILIN, O.P.

The renewal rate of muscle and liver proteins in ontogenesis.
Uch. zap KHGU 108:53-60 '60. (MIRA 14:3)

1. Otdel fiziologii cheloveka Khar'kovskogo gosudarstvennogo universiteta.
(PROTEIN METABOLISM) (AGE)

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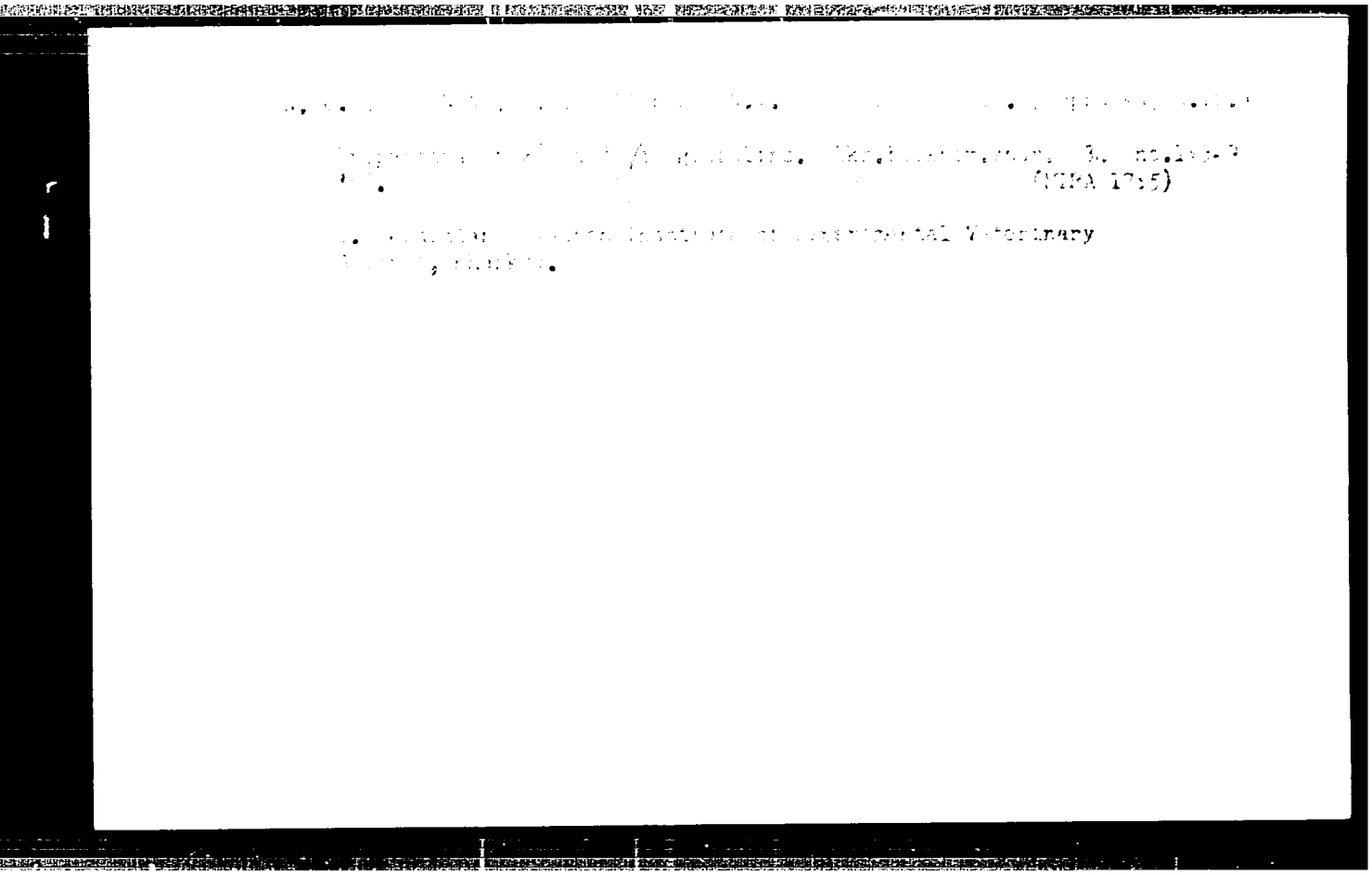

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SILIN, P.I.

Sewage Irrigation

Irrigating collective farm fields with waste water from sugar factories.
Sakh. prom., 26, No. 9, 1952.

9. Monthly List of Russian Accessions, Library of Congress, December 1952 1953, Uncl.

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[illegible]

[illegible] pipes for e[illegible] for pipelines of sugar factories. Sakh. [illegible] no. [illegible] (M[illegible] 10[illegible]

1. [illegible]sakhar.

(Pi[illegible], [illegible]ien)

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SILIN, P.I.

Lower the consumption of fresh water and decrease the amount of waste water(from "Zeitschrift für die Zuckerindustrie," no. 8, 1956). Sakh. prom. 32 no. 6:74 Je '58. (MIRA 11:7)
(Sugar industry)

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SILIN, P.I.

Processing waste water in beet sugar plants in Great Britain (from "Chemistry and Industry," Oct.1955). Sakh.prom. 32 no.10:72-76 O '58. (MIRA 11:11)
(Great Britain--Sewage--Purification)

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SILIN, P.I.

Use of expansion joints on outside steel piping at sugar factories. Sakh.prom. 33 no.3:25-26 Mr '59. (MIRA 12:4)

1. Giprosakhar.
(Pipe joints)

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SILIN, P.I.

Utilization of filter press waste. Sakh. prom. 33 no.4:70-71 Ap '59. (MIRA 12:6)
(Sugar industry--By-products)

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SILIN, P.I.

Planning practice and standards for planning sewage systems of Standards and Technical Requirements 141-56. Sakh.prom. 33 no.7:56 Jl '59. (MIRA 12:11)

1. Giprosakhar.
(Sewage--Purification)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610008-5

SILIN, P.I.

Processing waste water from sugar factories by way of soil (from "Zucker," nos. 2-3, 1961). Sakh. prom. 35 no.11:75 N '61. (MIRA 15:1)

(Sewage--Irrigation)

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SILIN, P.I.

Pneumatic conveying of filter-press mud (from "Gazeta Cukrownicza," no.5, 1961). Sakh.prom. 36 no.5:74 My '62. (MIRA 15:5)
(Poland---Sugar industry---Equipment and supplies)
(Pneumatic-tube transportation)

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SILIN, P.I.

Use of hydrocyclones for the clarification of flume waters.
Sakh.prom. 36 no.9:33-35 S '62. (MIRA 16:11)

1. Gosudarstvennyy proyektnyy institut sakharnoy promyshlennosti.

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SILIN, P.I.

Liming of flume water. Sakh. prom. 37 no.8:69 Ag '63.
(MIRA 16:8)

(Industrial wastes--Purification)
(Sugar beets--Transportation)

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SILIN, F.I.

Purification of the waste waters from sugar factories. Sakh.prom. 37 no.9:74-75 S '63. (MIRA 16:9)
(Czechoslovakia--Industrial wastes--Purification)

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BORKOVSKIY, I.A.; VOSTOKOV, A.I.; ZHVIRKO, I.S.; LIPESHKIN, I.P.; MEL'NIK, M.K.; MITROFANOV, V.P.; RODKEVICH, A.V.; SILIN, F.I.[deceased]; YAKUBOVSKIY, V.V.; YEREMENKO, B.A., retsenzent; MAR'YANCHIK, V.L., retsenzent; MAKSIMOV, A.I., retsenzent; PRITYKINA, L.A., red.

[Handbook for the sugar manufacturer] Spravochnik sakharnika. Moskva, Pishchevaia promyshlennost'. Pt.2. 1965. 778 p. (MIRA 18:9)

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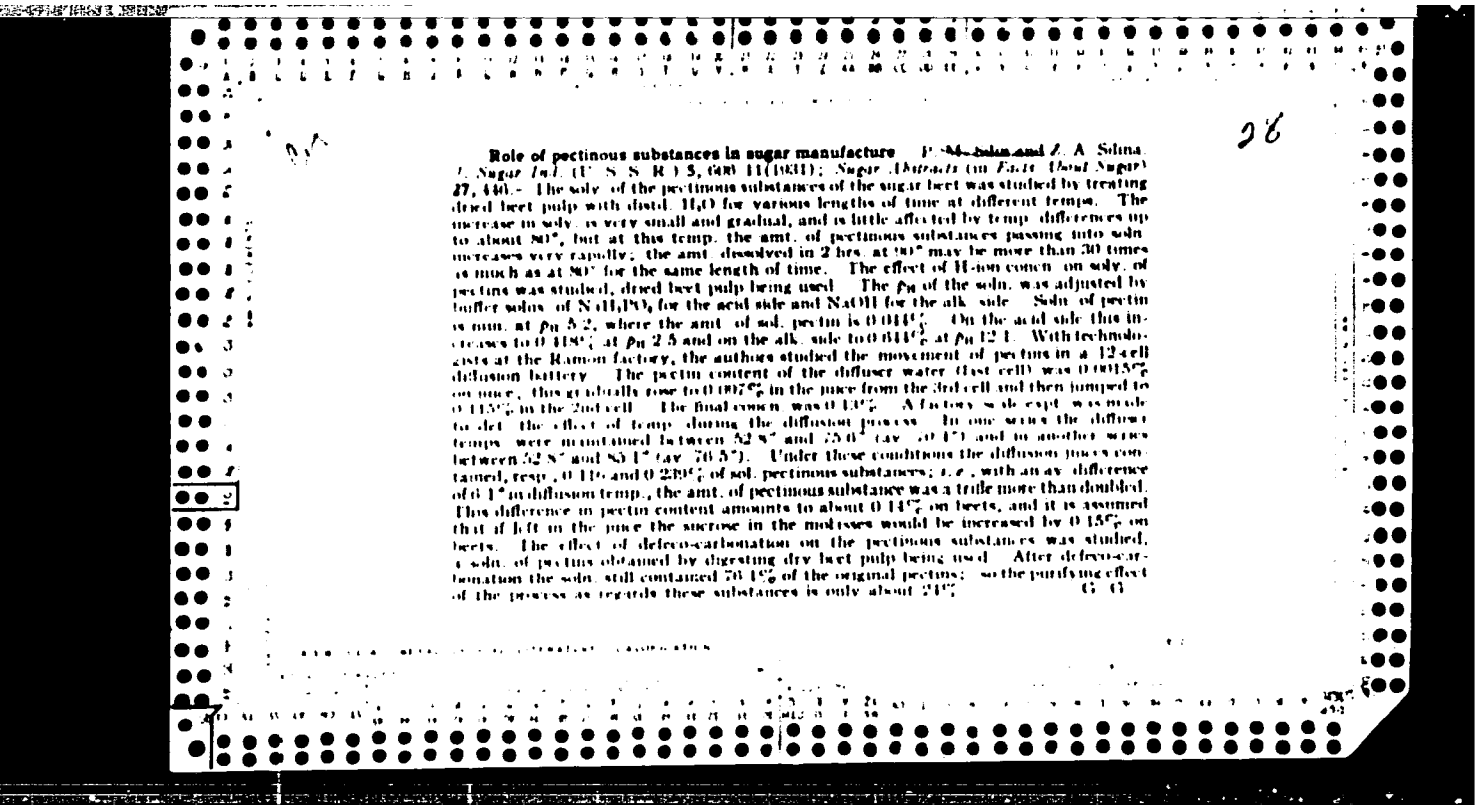

Role of pectinous substances in sugar manufacture. P. M. Silin and Z. A. Silina. *J. Sugar Ind.* (U. S. S. R.) 5, 608-11(1931); *Sugar Abstracts* (in *Facts About Sugar*) 27, 440.- The soly. of the pectinous substances of the sugar beet was studied by treating dried beet pulp with distd. H_2O for various lengths of time at different temps. The increase in soly. is very small and gradual, and is little affected by temp. differences up to about 80°, but at this temp. the amt. of pectinous substances passing into soln. increases very rapidly; the amt. dissolved in 2 hrs. at 90° may be more than 30 times as much as at 80° for the same length of time. The effect of H-ion concn. on soly. of pectins was studied, dried beet pulp being used. The p_H of the soln. was adjusted by buffer solns. of NaH_2PO_4 for the acid side and NaOH for the alk. side. Soln. of pectin is min. at p_H 5.2, where the amt. of sol. pectin is 0.044%. On the acid side this increases to 0.418% at p_H 2.5 and on the alk. side to 0.644% at p_H 12.1. With technologists at the Ramon factory, the authors studied the movement of pectins in a 12-cell diffusion battery. The pectin content of the diffuser water (last cell) was 0.0015% on juice, this gradually rose to 0.007% in the juice from the 3rd cell and then jumped to 0.115% in the 2nd cell. The final concn. was 0.13%. A factory scale expt. was made to det. the effect of temp. during the diffusion process. In one series the diffuser temps. were maintained between 52.8° and 75.6° (av. 70.4°) and in another series between 52.8° and 85.1° (av. 76.5°). Under these conditions the diffusion juices contained, resp., 0.116 and 0.239% of sol. pectinous substances; *i.e.*, with an av. difference of 6.1° in diffusion temp., the amt. of pectinous substance was a trifle more than doubled. This difference in pectin content amounts to about 0.14% on beets, and it is assumed that if left in the juice the sucrose in the molasses would be increased by 0.15% on beets. The effect of defeco-carbonation on the pectinous substances was studied, a soln. of pectins obtained by digesting dry beet pulp being used. After defeco-carbonation the soln. still contained 76.1% of the original pectins; so the purifying effect of the process as regards these substances is only about 24%. G. G.

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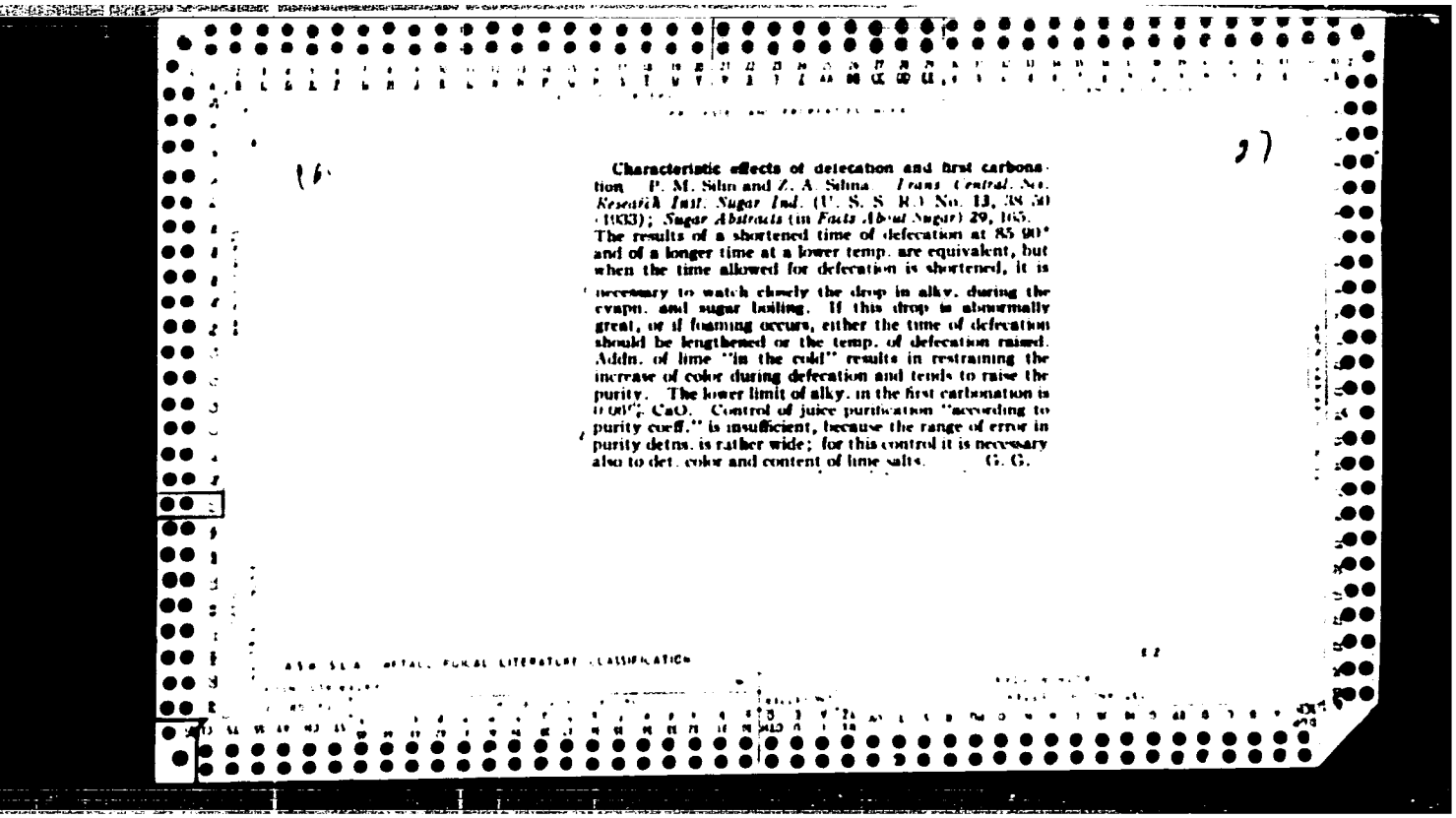

Characteristic effects of defecation and first carbonation. P. M. Silin and Z. A. Silina. *Trans. Central Sci. Research Inst. Sugar Ind.* (U. S. S. R.) No. 13, 38-50 (1933); *Sugar Abstracts* (in *Facts About Sugar*) 29, 165. The results of a shortened time of defecation at 85-90° and of a longer time at a lower temp. are equivalent, but when the time allowed for defecation is shortened, it is necessary to watch closely the drop in alky. during the evapn. and sugar boiling. If this drop is abnormally great, or if foaming occurs, either the time of defecation should be lengthened or the temp. of defecation raised. Addn. of lime "in the cold" results in restraining the increase of color during defecation and tends to raise the purity. The lower limit of alky. in the first carbonation is 0.01% CaO. Control of juice purification "according to purity coeff." is insufficient, because the range of error in purity detns. is rather wide; for this control it is necessary also to det. color and content of lime salts. G. G.

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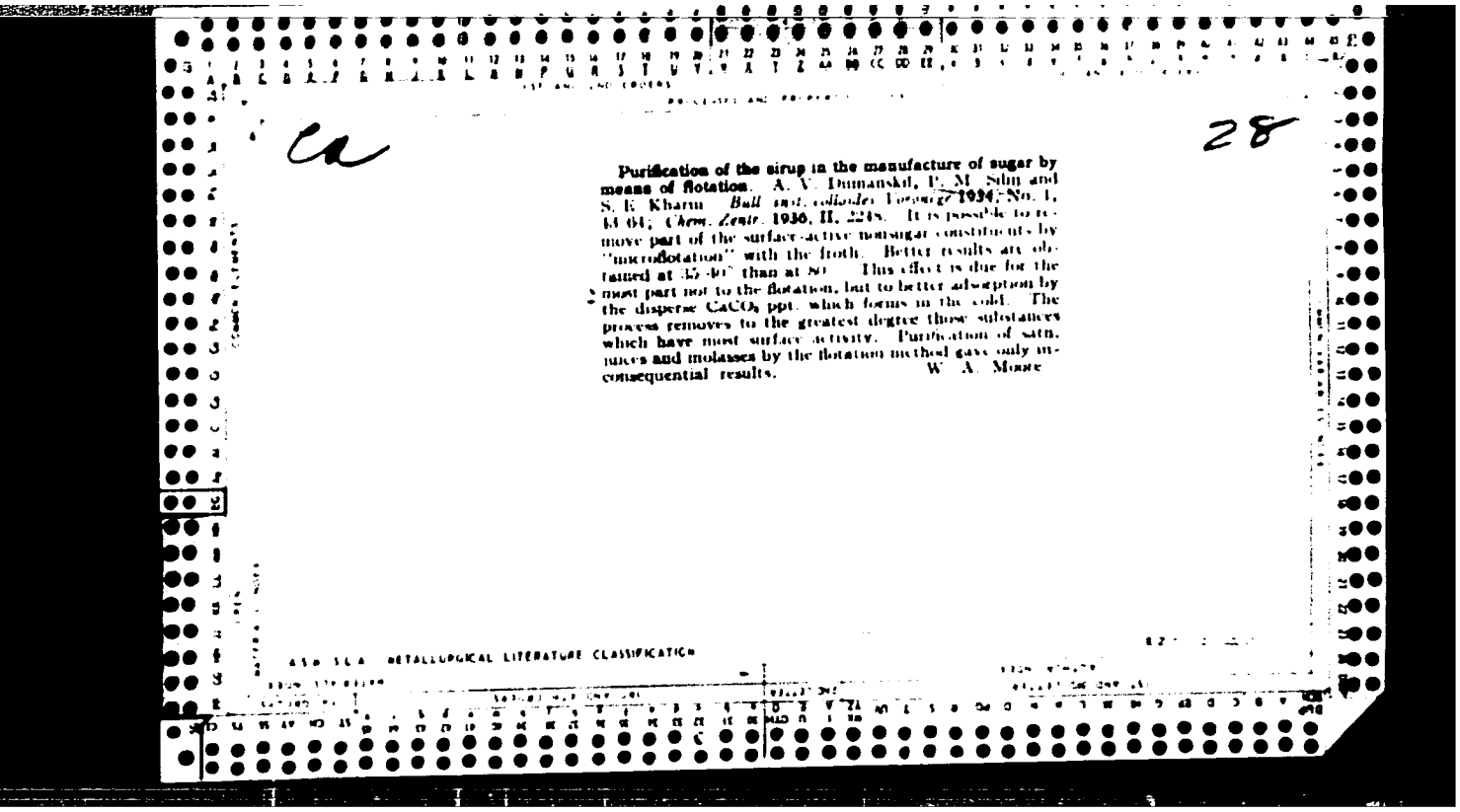

Ca

28

Purification of the sirup in the manufacture of sugar by means of flotation. A. V. Dumanskii, P. M. Silin and S. E. Kharin. *Bull. inst. colloides Voronège* 1934, No. 1, 43-64; *Chem. Zentr.* 1936, II, 2248. It is possible to remove part of the surface-active nonsugar constituents by "microflotation" with the froth. Better results are obtained at 35-40° than at 80°. This effect is due for the most part not to the flotation, but to better adsorption by the disperse $CaCO_3$ ppt. which forms in the cold. The process removes to the greatest degree those substances which have most surface activity. Purification of satn. juices and molasses by the flotation method gave only inconsequential results. W. A. Moore

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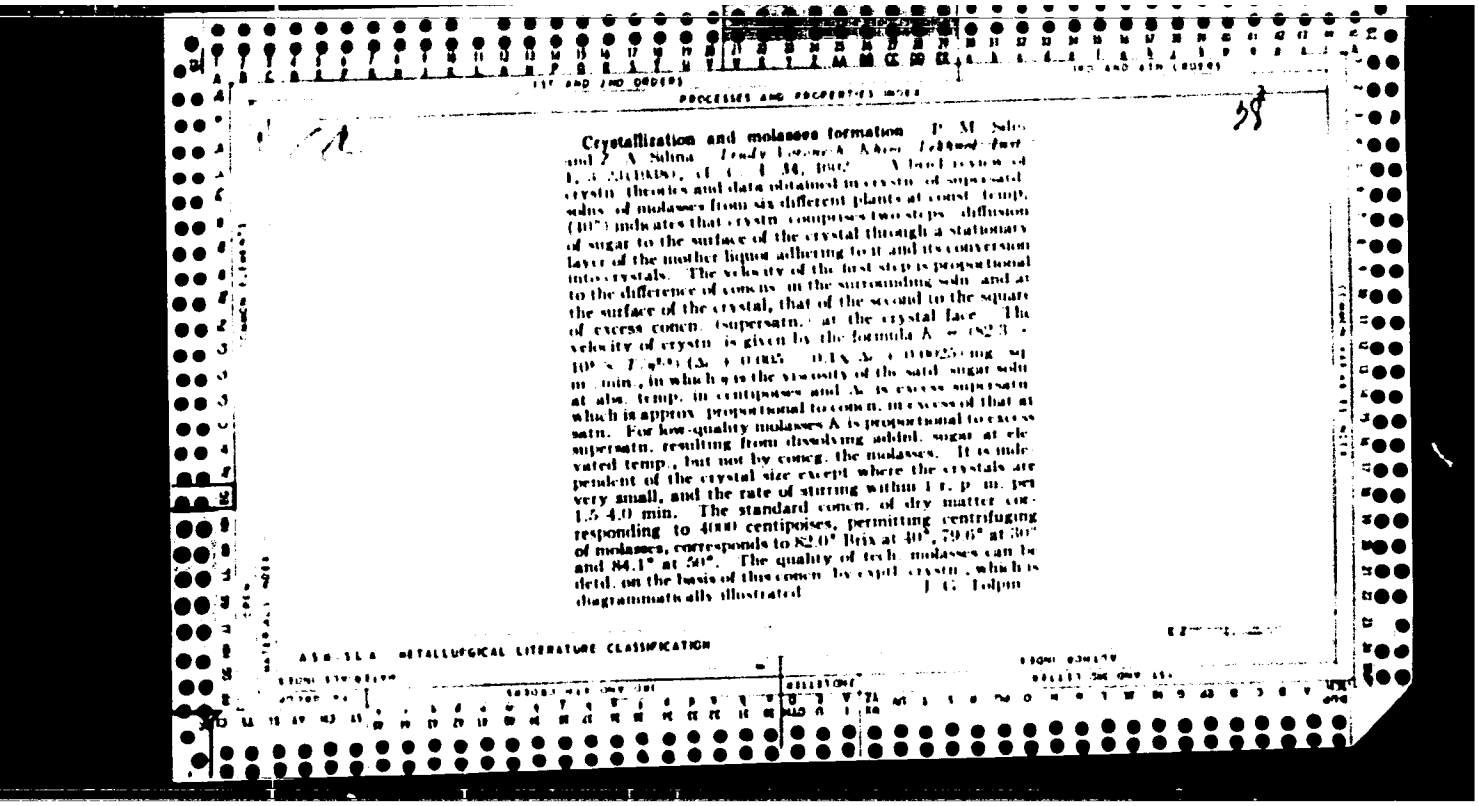

PROCESSES AND PROPERTIES INDEX

38

Crystallization and molasses formation. P. M. Silin and Z. A. Silina. *Trudy Voronezh. Khim. Tekhnol. Inst.* 1, 3 (1938), cf. C. 1, 34, 1002. A brief review of crystn. theories and data obtained in crystn. of supersatd. solns. of molasses from six different plants at const. temp. (40°) indicates that crystn. comprises two steps: diffusion of sugar to the surface of the crystal through a stationary layer of the mother liquor adhering to it and its conversion into crystals. The velocity of the first step is proportional to the difference of concns. in the surrounding soln. and at the surface of the crystal, that of the second to the square of excess concn. (supersatn.) at the crystal face. The velocity of crystn. is given by the formula $K = (82.3 \times 10^{8} \times T/\eta^{2.5})(\Delta c + 0.005 - 0.1\sqrt{\Delta c} + 0.0025)$ mg./sq. m./min., in which η is the viscosity of the satd. sugar soln. at abs. temp. in centipoises and Δc is excess supersatn. which is approx. proportional to concn. in excess of that at satn. For low-quality molasses K is proportional to excess supersatn. resulting from dissolving addnl. sugar at elevated temp., but not by concg. the molasses. It is independent of the crystal size except where the crystals are very small, and the rate of stirring within 1 r. p. m. per 1.5-4.0 min. The standard concn. of dry matter corresponding to 4000 centipoises, permitting centrifuging of molasses, corresponds to 82.0° Brix at 40°, 79.6° at 30° and 84.1° at 50°. The quality of tech. molasses can be detd. on the basis of this concn. by exptl. crystn., which is diagrammatically illustrated. J. G. Tolpin

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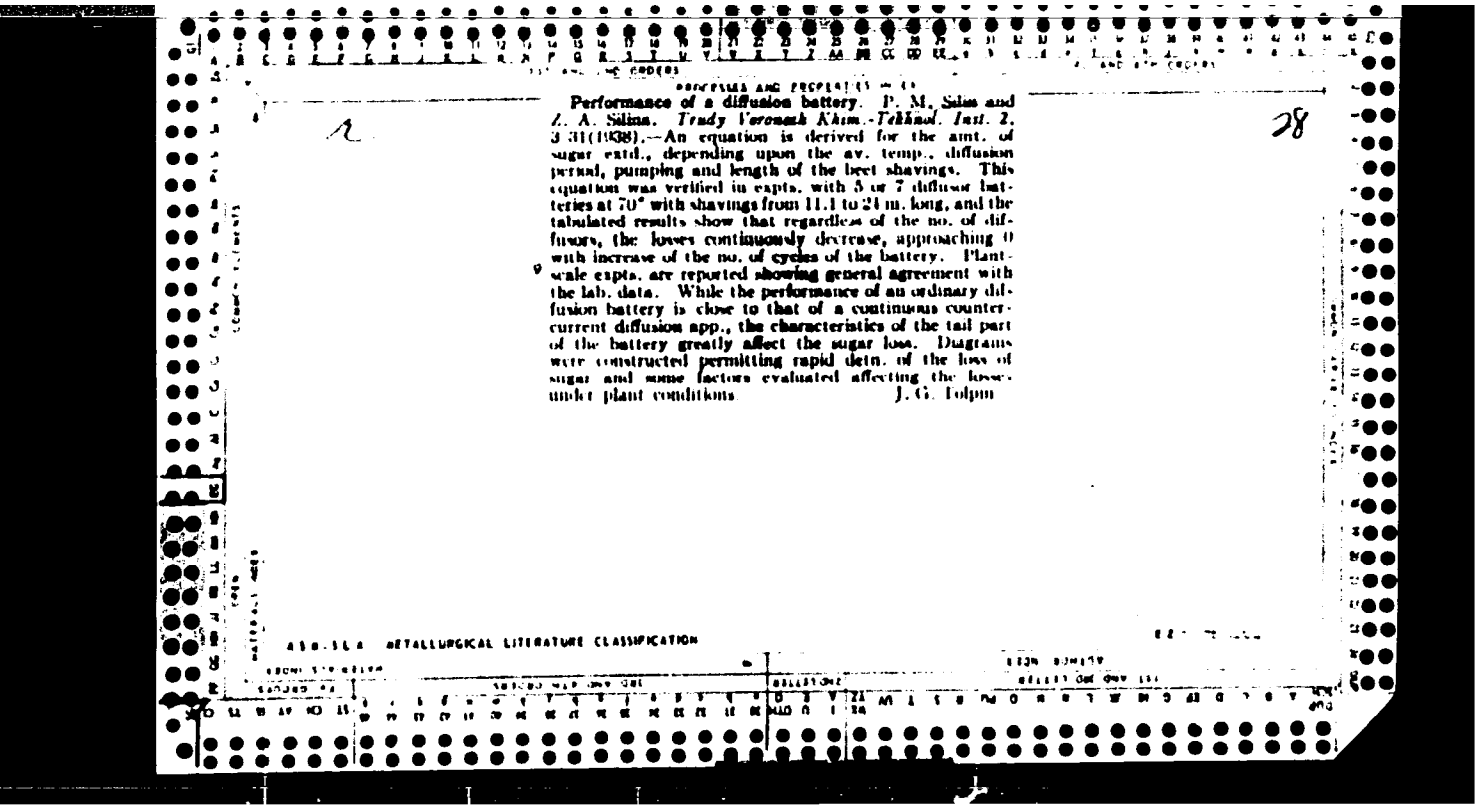

Performance of a diffusion battery. P. M. Silin and Z. A. Silina. *Trudy Voronezh Khim.-Tekhnol. Inst.* 2, 3-31(1938).—An equation is derived for the amt. of sugar extd., depending upon the av. temp., diffusion period, pumping and length of the beet shavings. This equation was verified in expts. with 5 or 7 diffuser batteries at 70° with shavings from 11.1 to 24 m. long, and the tabulated results show that regardless of the no. of diffusers, the losses continuously decrease, approaching 0 with increase of the no. of cycles of the battery. Plant-scale expts. are reported showing general agreement with the lab. data. While the performance of an ordinary diffusion battery is close to that of a continuous counter-current diffusion app., the characteristics of the tail part of the battery greatly affect the sugar loss. Diagrams were constructed permitting rapid detn. of the loss of sugar and some factors evaluated affecting the losses under plant conditions. J. G. Tolpin

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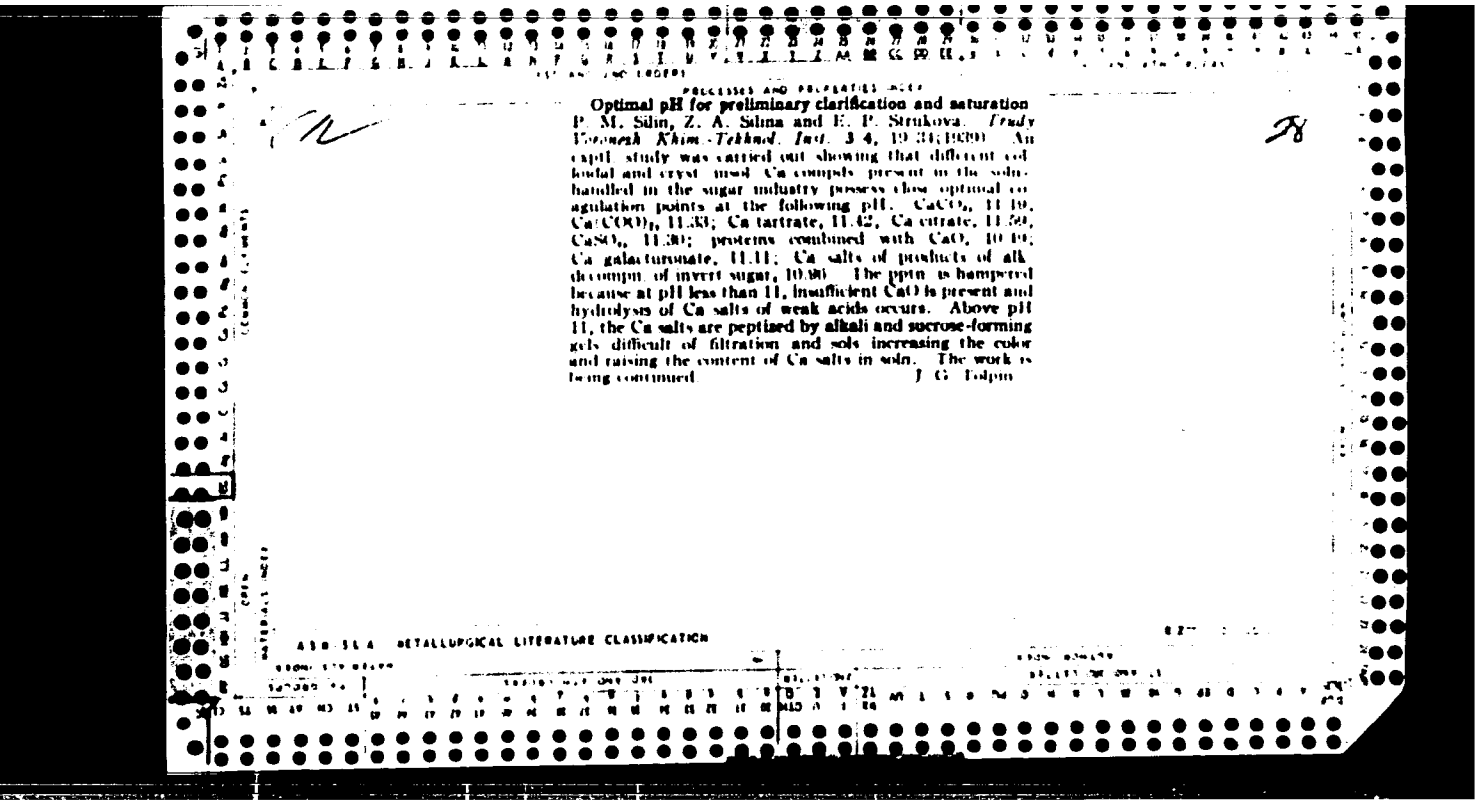
PROCESSES AND PROPERTIES INDEX



Optimal pH for preliminary clarification and saturation

P. M. Silin, Z. A. Silina and E. P. Strukova. *Trudy Voronezh Khim.-Tekhnol. Inst.* 3 4, 19-34(1939). An exptl. study was carried out showing that different colloidal and cryst. insol. Ca compds. present in the soln. handled in the sugar industry possess close optimal coagulation points at the following pH: $CaCO_3$, 11.19; $Ca(COO)_2$, 11.33; Ca tartrate, 11.42; Ca citrate, 11.59; $CaSO_4$, 11.30; proteins combined with CaO, 10.19; Ca galacturonate, 11.11; Ca salts of products of alk. decompn. of invert sugar, 10.86. The pptn. is hampered because at pH less than 11, insufficient CaO is present and hydrolysis of Ca salts of weak acids occurs. Above pH 11, the Ca salts are peptized by alkali and sucrose-forming gels difficult of filtration and sols increasing the color and raising the content of Ca salts in soln. The work is being continued. J. G. Tolpin

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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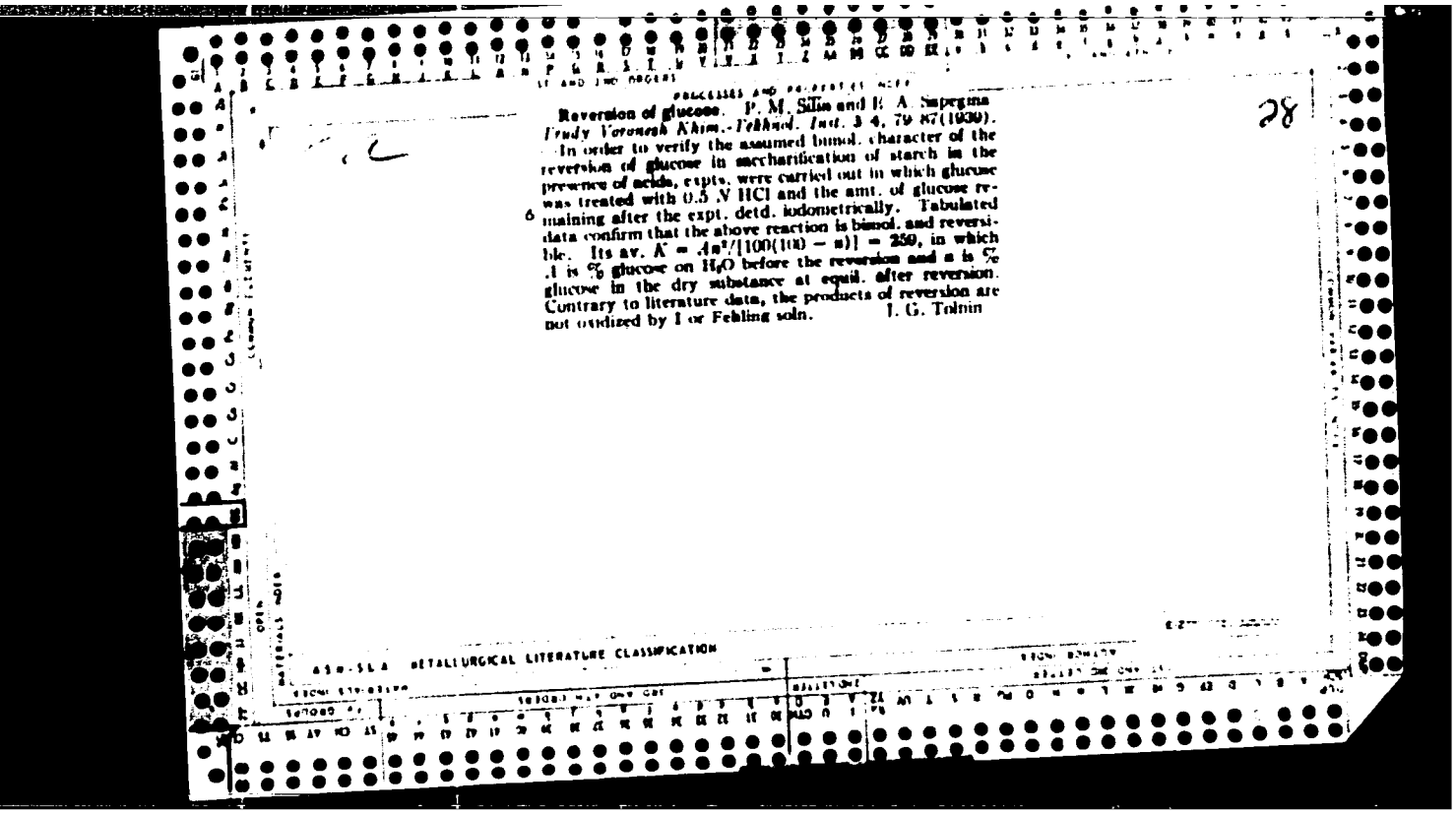

Reversion of glucose. P. M. Silin and V. A. Supegina *Trudy Voronezh. Khim.-Tekhnol. Inst.* 3 4, 79-87 (1939). In order to verify the assumed bimol. character of the reversion of glucose in saccharification of starch in the presence of acids, expts. were carried out in which glucose was treated with 0.5 *N* HCl and the amt. of glucose remaining after the expt. detd. iodometrically. Tabulated data confirm that the above reaction is bimol. and reversible. Its av. $K = 4a^2/[100(100 - a)] = 250$, in which *a* is % glucose on H_2O before the reversion and *a* is % glucose in the dry substance at equil. after reversion. Contrary to literature data, the products of reversion are not oxidized by I or Fehling soln. J. G. Tolmin

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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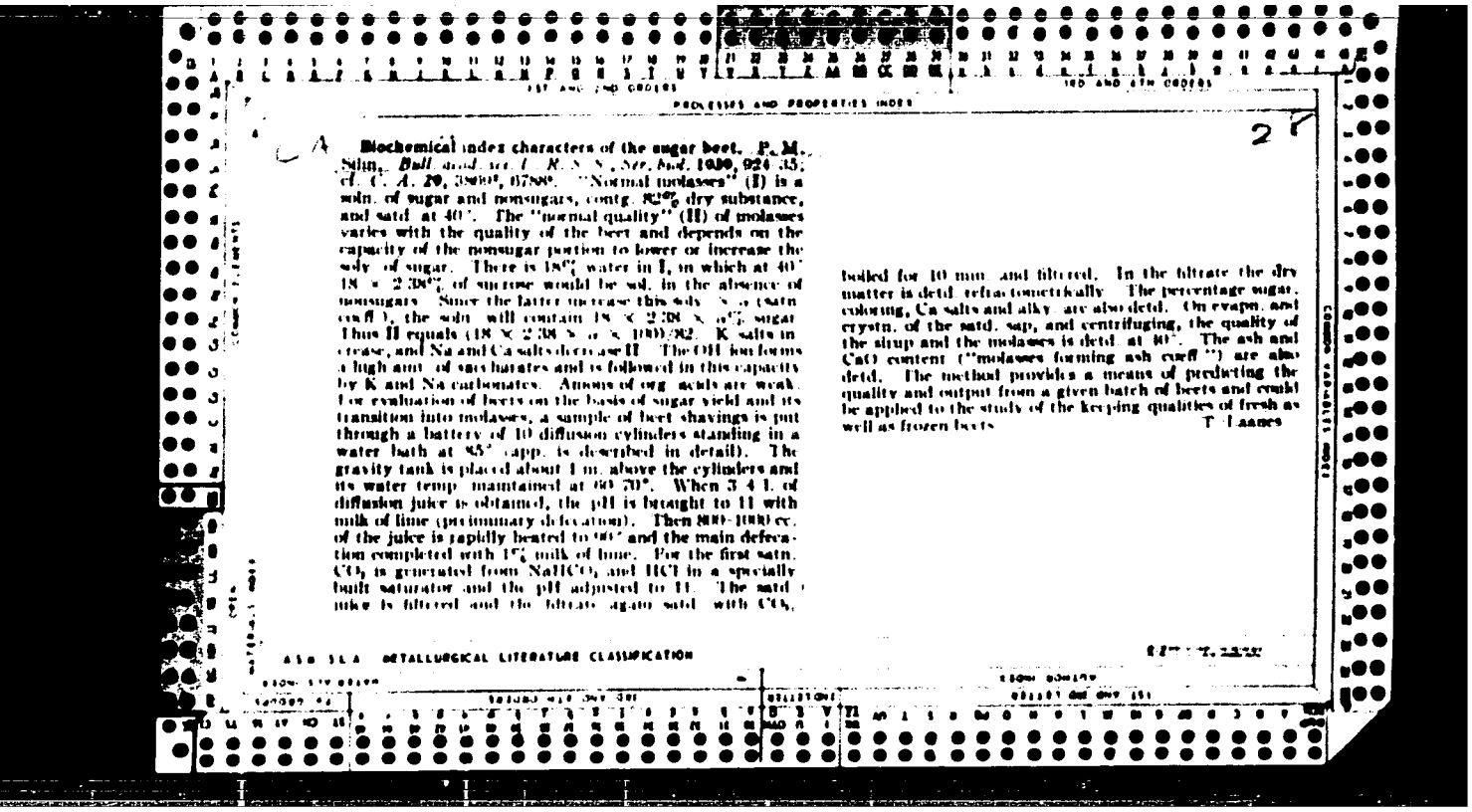
1ST AND 2ND ORDERS

3RD AND 4TH ORDERS



PROCESSES AND PROPERTIES INDEX

CA

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Biochemical index characters of the sugar beet. P. M. Silin. *Bull. acad. sci. U. R. S. S., Ser. biol.* **1930**, 924-35; cf. *C. A.* **20**, 3869[2], 6788[6]. "Normal molasses" (I) is a soln. of sugar and nonsugars, contg. 82% dry substance, and satd. at 40°. The "normal quality" (II) of molasses varies with the quality of the beet and depends on the capacity of the nonsugar portion to lower or increase the soly. of sugar. There is 18% water in I, in which at 40° 18 × 2.38% of sucrose would be sol. in the absence of nonsugars. Since the latter increase this soly. × α (satn. coeff.), the soln. will contain 18 × 2.38 × α% sugar. Thus II equals (18 × 2.38 × α × 100)/82. K salts increase, and Na and Ca salts decrease II. The OH ion forms a high amt. of saccharates and is followed in this capacity by K and Na carbonates. Anions of org. acids are weak. For evaluation of beets on the basis of sugar yield and its transition into molasses, a sample of beet shavings is put through a battery of 10 diffusion cylinders standing in a water bath at 85° (app. is described in detail). The gravity tank is placed about 1 m. above the cylinders and its water temp. maintained at 60-70°. When 3-4 l. of diffusion juice is obtained, the pH is brought to 11 with milk of lime (preliminary defecation). Then 800-1000 cc. of the juice is rapidly heated to 90° and the main defecation completed with 1% milk of lime. For the first satn. CO_2 is generated from $NaHCO_3$ and HCl in a specially built saturator and the pH adjusted to 11. The satd. juice is filtered and the filtrate again satd. with CO_2, boiled for 10 min. and filtered. In the filtrate the dry matter is detd. refractometrically. The percentage sugar, coloring, Ca salts and alky. are also detd. On evapn. and crystn. of the satd. sap, and centrifuging, the quality of the sirup and the molasses is detd. at 40°. The ash and CaO content ("molasses forming ash coeff.") are also detd. The method provides a means of predicting the quality and output from a given batch of beets and could be applied to the study of the keeping qualities of fresh as well as frozen beets. T. Laanes

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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[redacted] proizvodstva.

(Control and accounting in the sugar refining industry) Moskva, Pishchepromizdat, 19[illegible]. 78 p. (49-42737)

TP390.I8

1. Sugar - Manufacture and refining. 2. Beets and beet sugar. I. Smirnov, V. A., jt. au. II. Silin, P. M. Khimicheskii kontrol'sveklosakharnogo proizvodstva.

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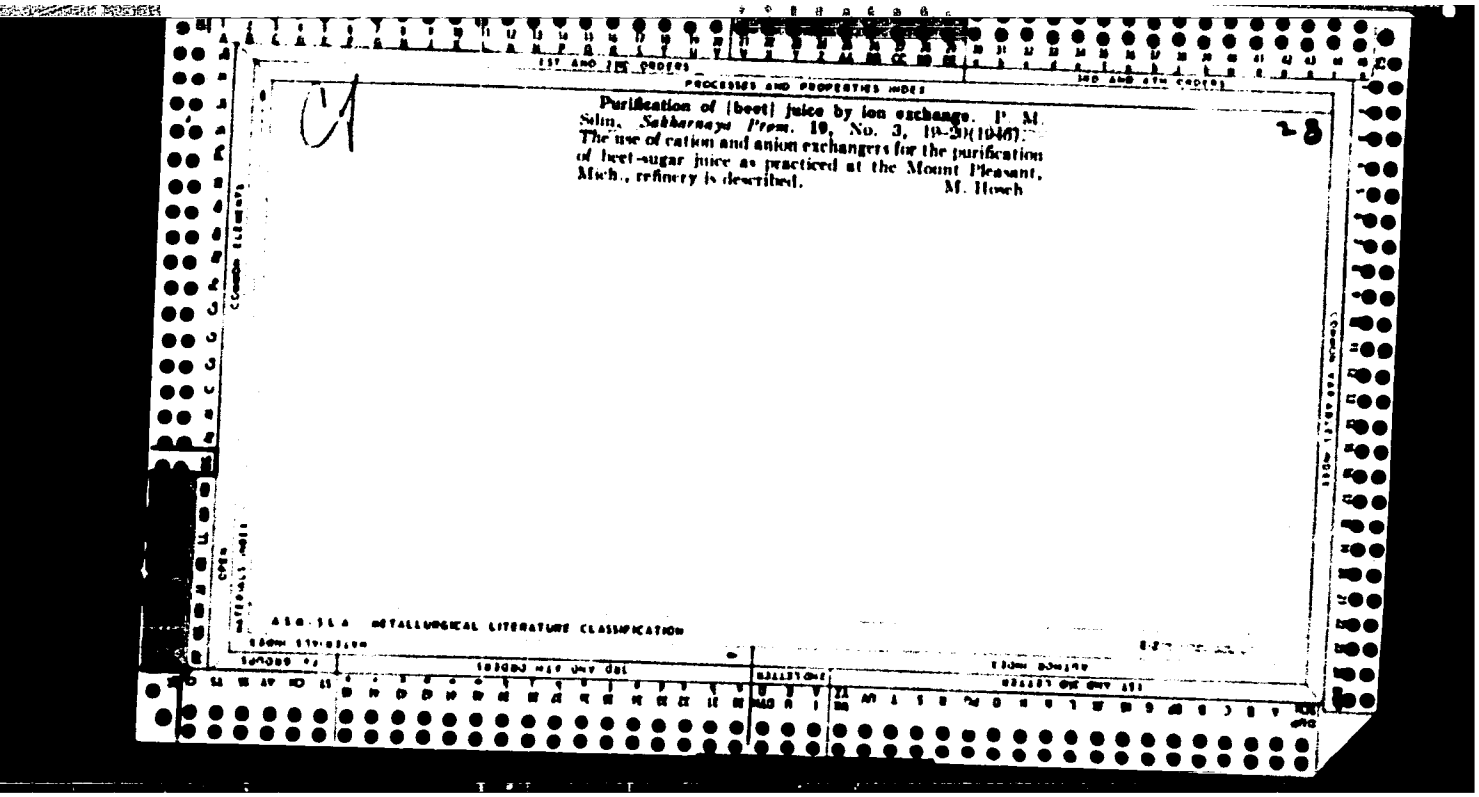

PROCESSES AND PROPERTIES INDEX

Purification of [beet] juice by ion exchange. P. M. Selin. *Sukharnaya Prom.* 19, No. 3, 19-20(1946). The use of cation and anion exchangers for the purification of beet-sugar juice as practiced at the Mount Pleasant, Mich., refinery is described. M. Hoch

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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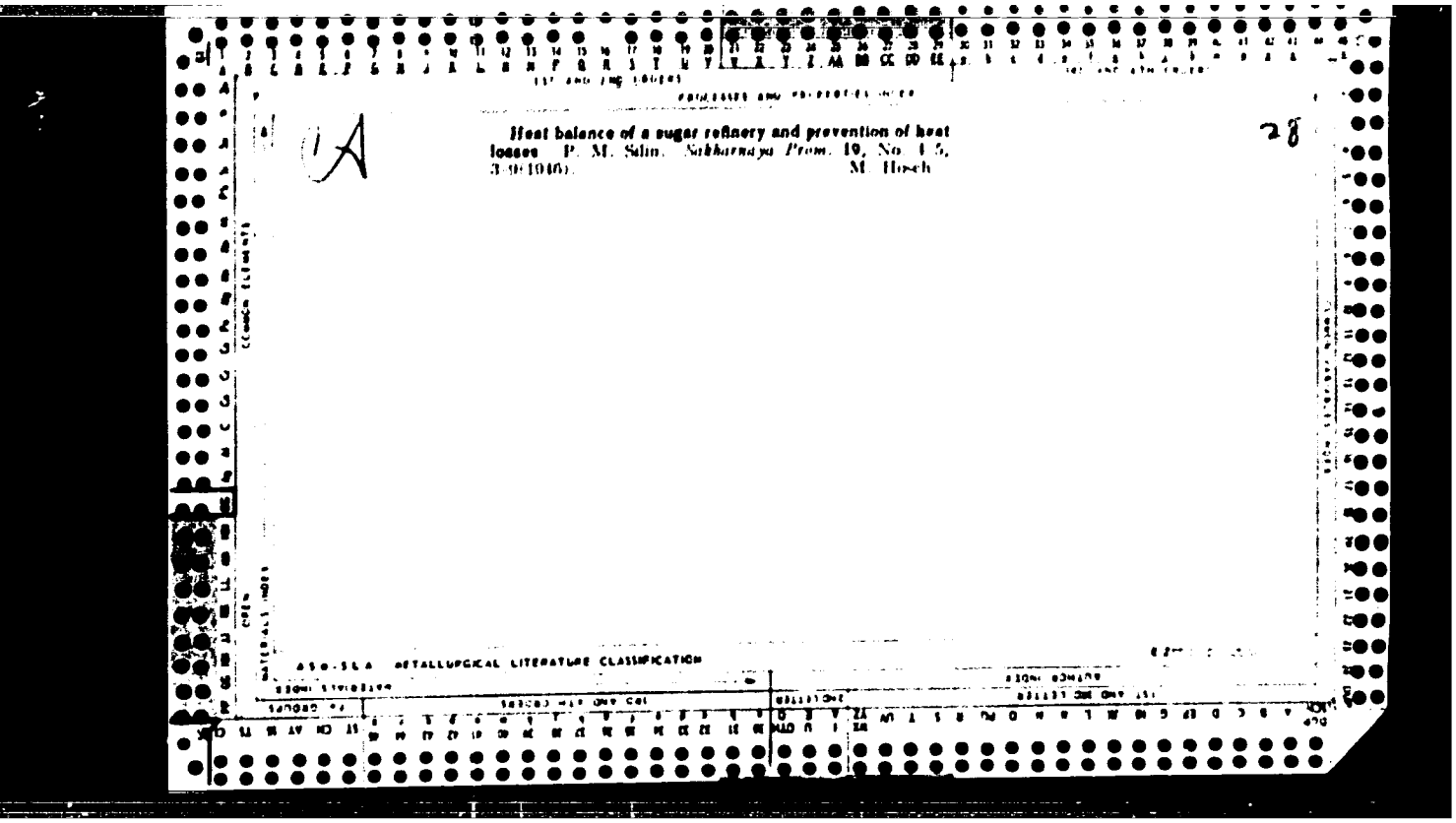

1A

Heat balance of a sugar refinery and prevention of heat losses P. M. Salin. *Sakharnaya Prom.* 19, No. 1-5, 3-9(1945). M. Hesch

28

ASD-SLA METALLURGICAL LITERATURE CLASSIFICATION

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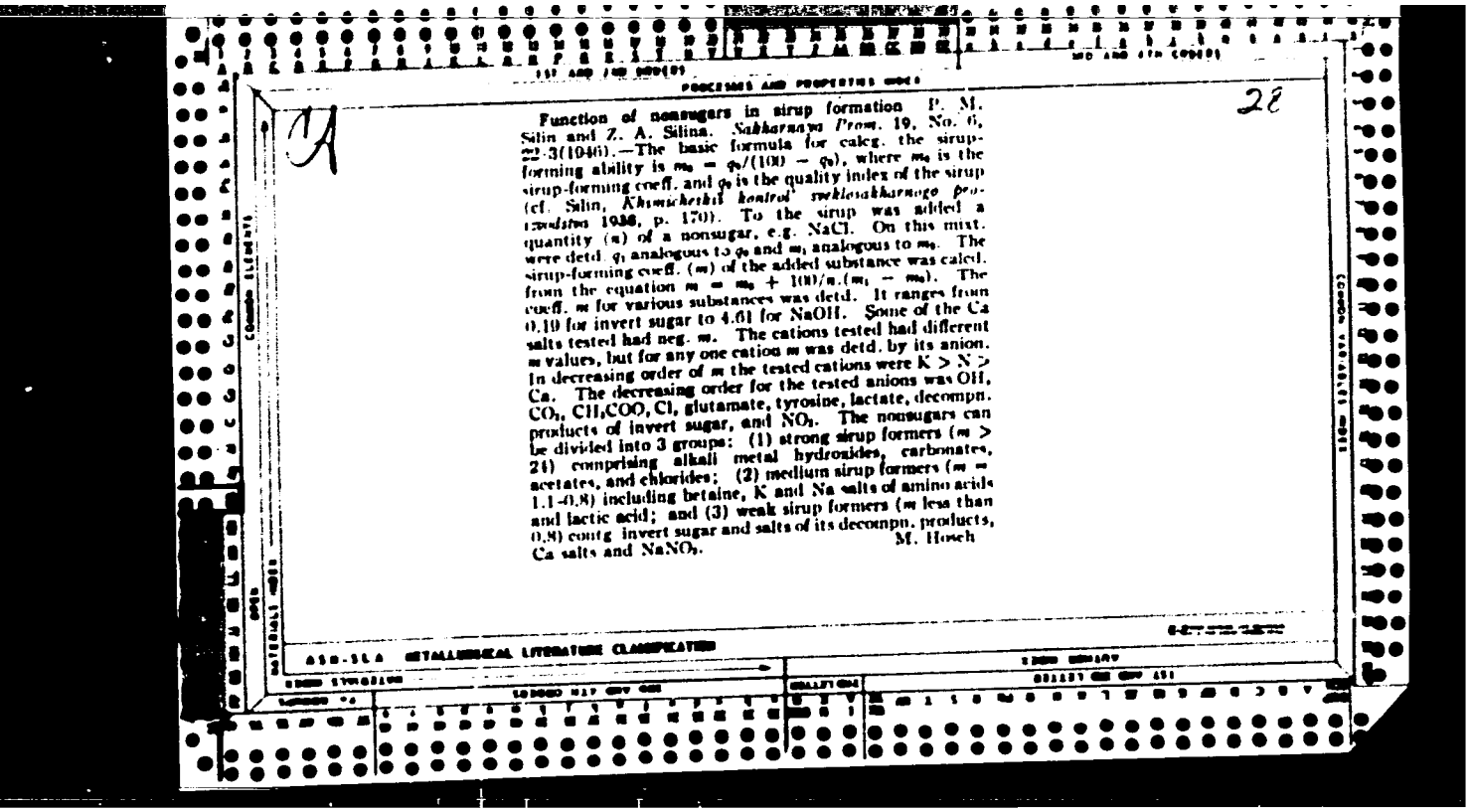

PROCESSES AND PROPERTIES INDEX

28

Function of nonsugars in sirup formation. P. M. Silin and Z. A. Silina. *Sakharnaya Prom.* 19, No. 6, 22-3(1946).—The basic formula for calcg. the sirup-forming ability is $m_0 = q_0/(100 - q_0)$, where m_0 is the sirup-forming coeff. and q_0 is the quality index of the sirup (cf. Silin, *Khimicheskii kontrol' svekloskharnogo proizvodstva* 1938, p. 170). To the sirup was added a quantity (n) of a nonsugar, e.g. NaCl. On this mixt. were detd. q_1 analogous to q_0 and m_1 analogous to m_0. The sirup-forming coeff. (m) of the added substance was calcd. from the equation $m = m_0 + 100/n.(m_1 - m_0)$. The coeff. m for various substances was detd. It ranges from 0.10 for invert sugar to 4.61 for NaOH. Some of the Ca salts tested had neg. m. The cations tested had different m values, but for any one cation m was detd. by its anion. In decreasing order of m the tested cations were K > N > Ca. The decreasing order for the tested anions was OH, CO_3, CH_3COO, Cl, glutamate, tyrosine, lactate, decompn. products of invert sugar, and NO_3. The nonsugars can be divided into 3 groups: (1) strong sirup formers (m > 2.4) comprising alkali metal hydroxides, carbonates, acetates, and chlorides; (2) medium sirup formers (m = 1.1-0.8) including betaine, K and Na salts of amino acids and lactic acid; and (3) weak sirup formers (m less than 0.8) contg. invert sugar and salts of its decompn. products, Ca salts and $NaNO_3$.

M. Hosch

A58-31A METALLURGICAL LITERATURE CLASSIFICATION

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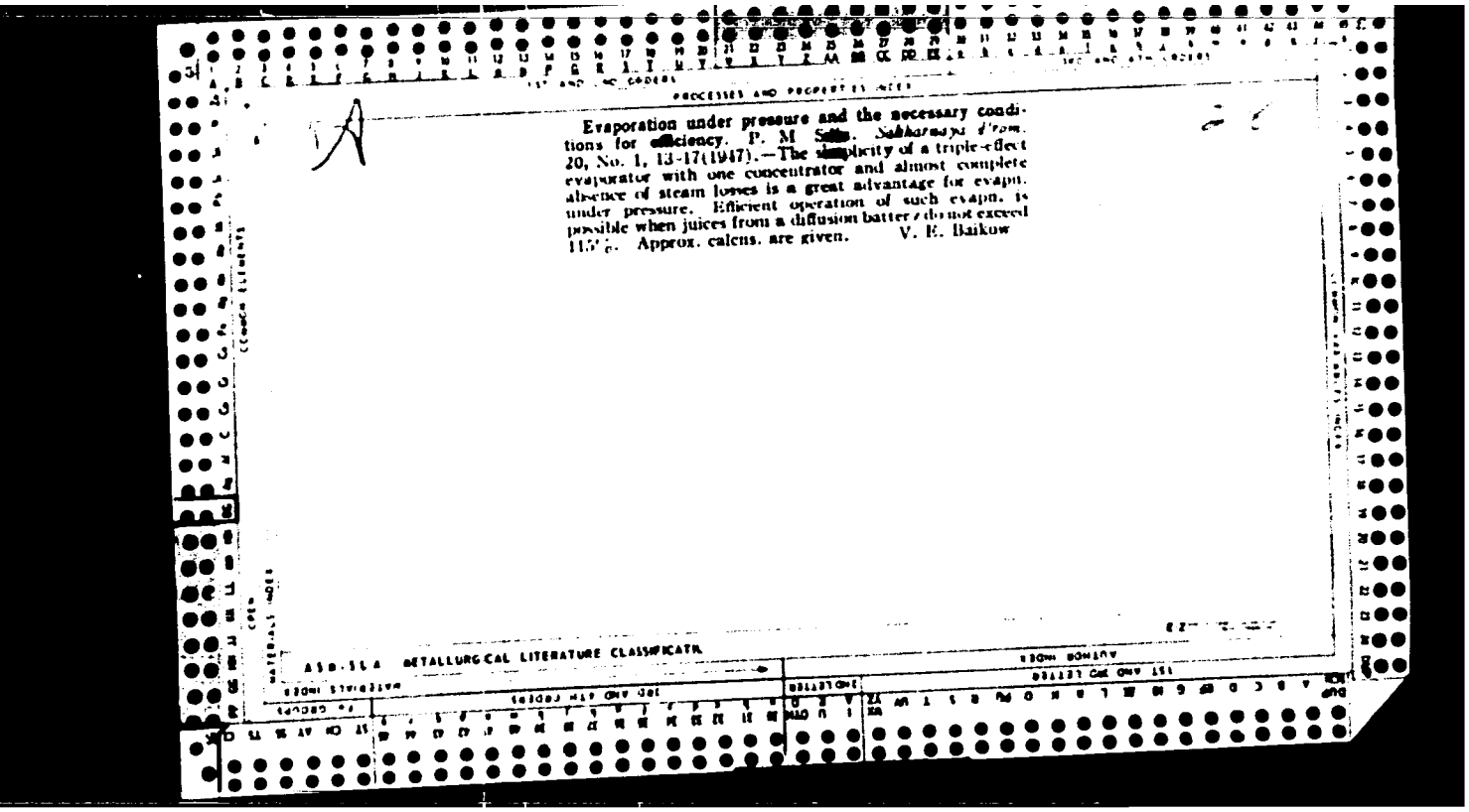

Evaporation under pressure and the necessary conditions for efficiency. P. M Sethi. *Sukharnaya Prom.* 20, No. 1, 13-17(1947).—The simplicity of a triple-effect evaporator with one concentrator and almost complete absence of steam losses is a great advantage for evapn. under pressure. Efficient operation of such evapn. is possible when juices from a diffusion batter do not exceed 115°. Approx. calcns. are given. V. E. Baikow

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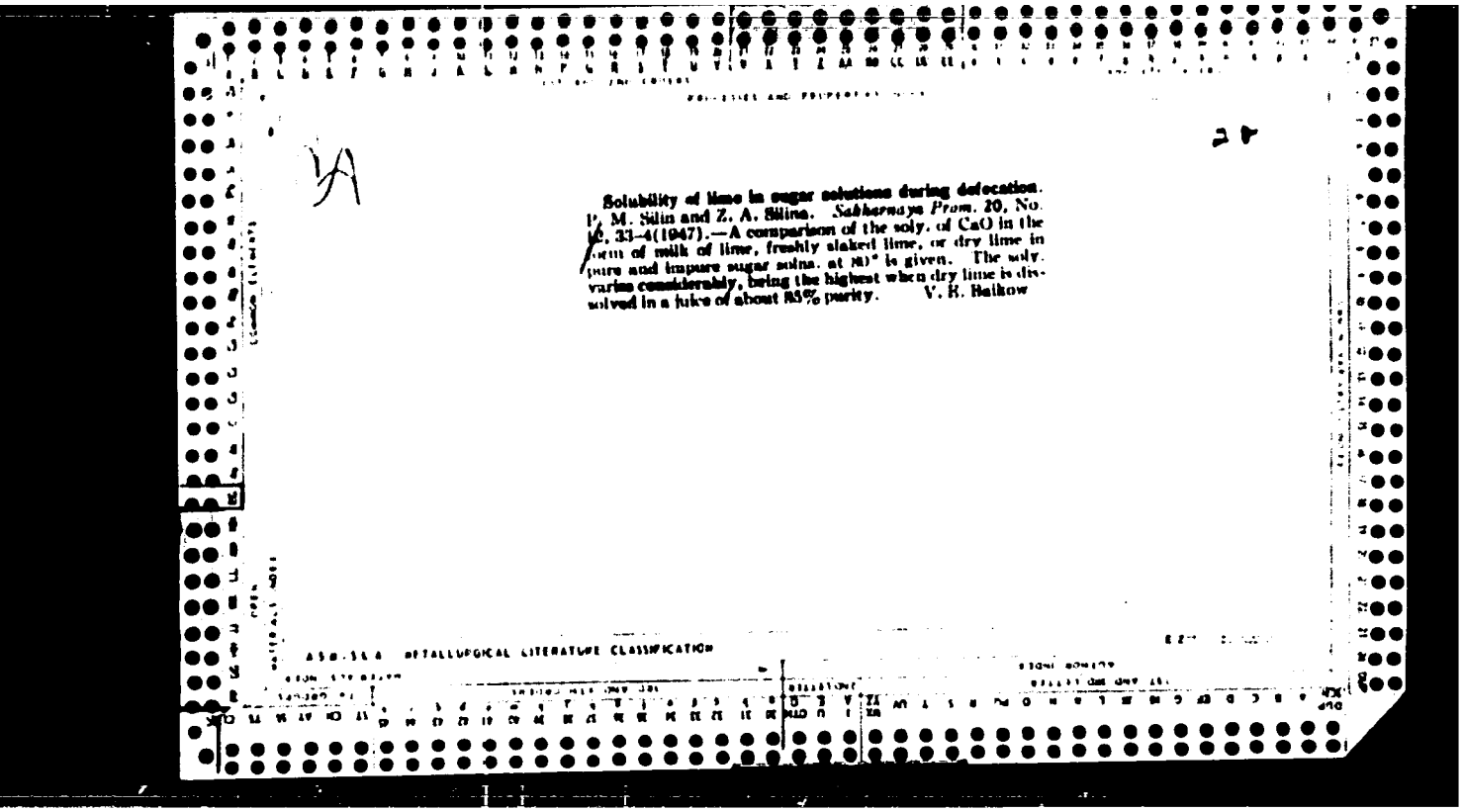

Solubility of lime in sugar solutions during defecation. P. M. Silin and Z. A. Silina. *Sakharnaya Prom.* 20, No. 12, 33–4(1947).—A comparison of the soly. of CaO in the form of milk of lime, freshly slaked lime, or dry lime in pure and impure sugar solns. at 80° is given. The soly. varies considerably, being the highest when dry lime is dissolved in a juice of about 85% purity. V. R. Balkow

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1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

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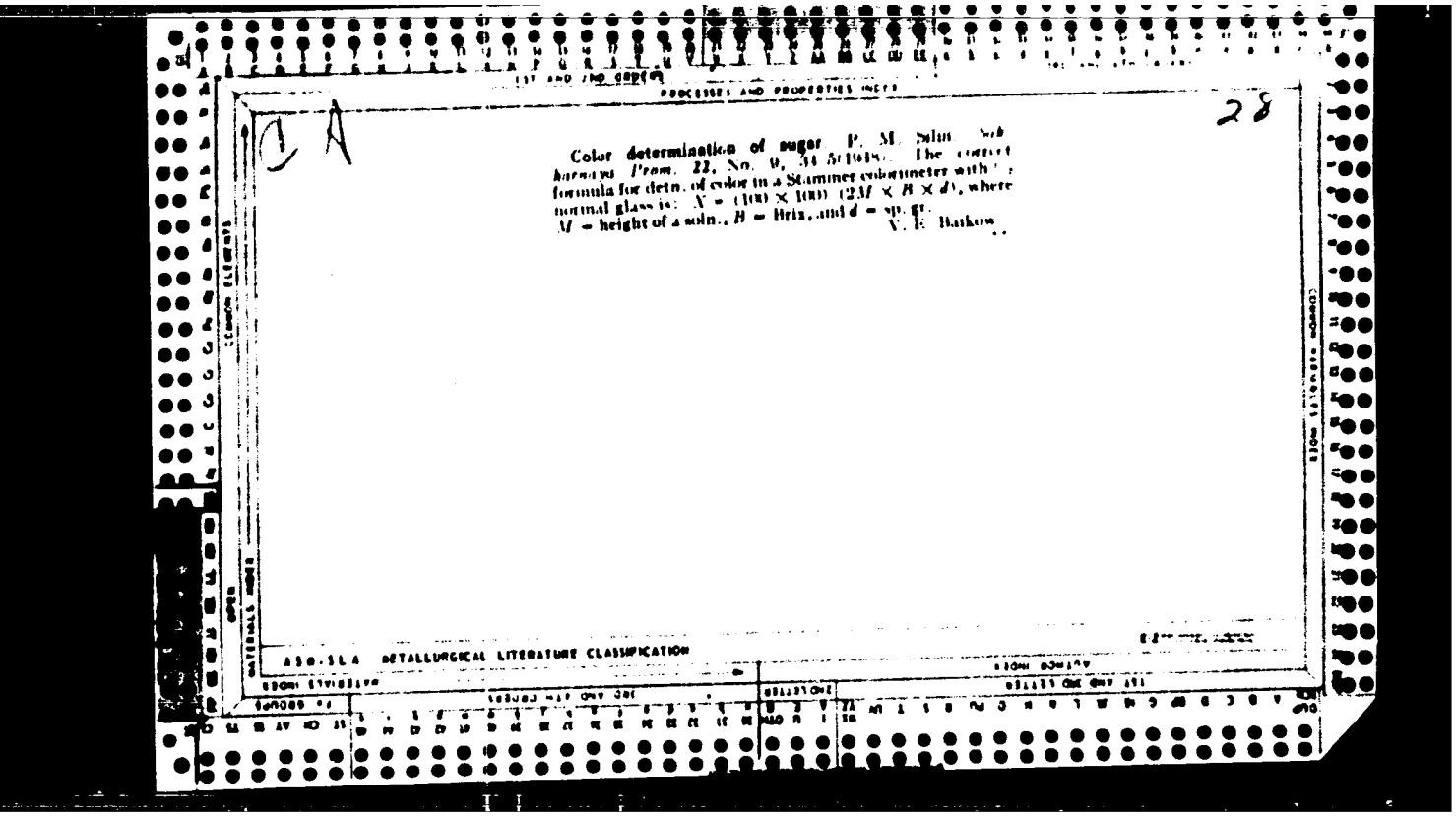

28

Color determination of sugar. P. M. Silin. *Sakharnaya Prom.* 22, No. 9, 34-5(1948). The correct formula for detn. of color in a Stammer colorimeter with ½ normal glass is: $X = (100 \times 100)/(2M \times B \times d)$, where M = height of a soln., B = Brix, and d = sp. gr.

V. E. Baikow

COMMON ELEMENTS

COMMON VARIABLES INDEX

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1ST AND 2ND LETTER

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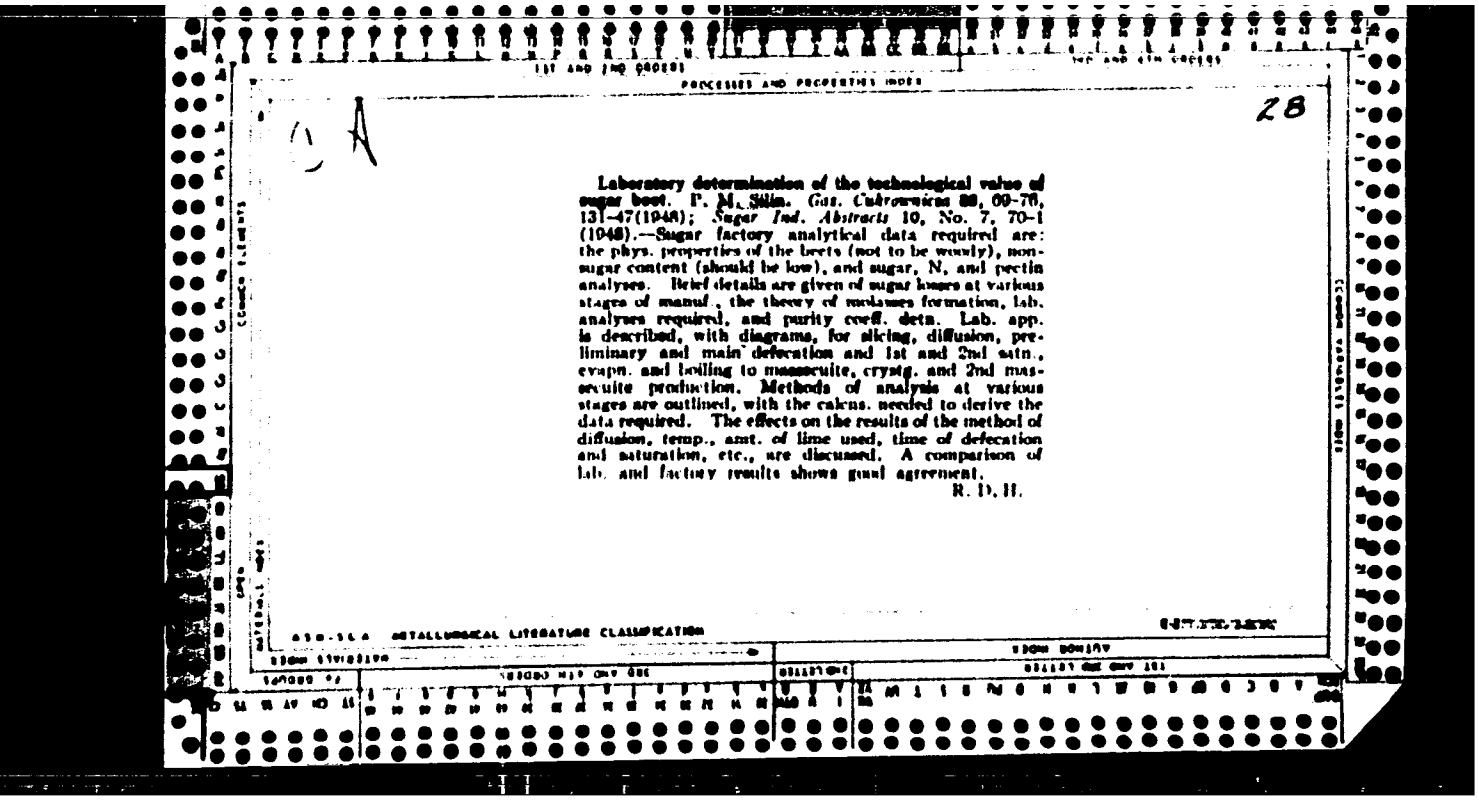

PROCESSES AND PROPERTIES INDEX

28

Laboratory determination of the technological value of sugar beet. P. M. Silin. *Gaz. Cukrownicza* **66**, 69–70, 131–47(1948); *Sugar Ind. Abstracts* 10, No. 7, 70–1 (1948).—Sugar factory analytical data required are: the phys. properties of the beets (not to be wormy), non-sugar content (should be low), and sugar, N, and pectin analyses. Brief details are given of sugar losses at various stages of manuf., the theory of molasses formation, lab. analyses required, and purity coeff. detn. Lab. app. is described, with diagrams, for slicing, diffusion, preliminary and main defecation and 1st and 2nd satn., evapn. and boiling to massecuite, crystg. and 2nd massecuite production. Methods of analysis at various stages are outlined, with the calcns. needed to derive the data required. The effects on the results of the method of diffusion, temp., amt. of lime used, time of defecation and saturation, etc., are discussed. A comparison of lab. and factory results shows good agreement.

R. D. H.

METALLURGICAL LITERATURE CLASSIFICATION

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[illegible]

Khim cheskiy kontrol' svelosakharnogo proisvodstva (Chemical control of sugar beet production) Moskva, Pishchepromizdat, 1949. 226 p. illus , diagrs., tables. "Literatura": p. (2[illegible])

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SILIN, P. M.

Chemical Abst.
Vol. 48 No. 3
Feb. 10, 1954
Sugar, Starch, and Gums

Simplified calculation of the evaporation in a sugar factory. P. M. Silin. *Trudy Leningrad Tekhnol. Inst. Pishchevoi Prom.* 1, (IX), 16-21(1949).—Formulas and tables are given. V. E. Baikow

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SILIN, P.M.

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Koyefitsiyent nasyslchyeniya I pycryesyshch - yeniya. Sakhar. Prom - st'm 1949, No. 8, C. 20-22

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Obtaining diffusion juices. P. M. Silin. Sakharnaya Prom. 24, No. 11, 17-23(1950). V. E. Baikow

SILIN, P.M., professor, doktor tekhnicheskikh nauk.

Efficient methods for evaporating and crystallizing massecuite in beet sugar factories. Trudy MTIPP 2:41-66 '52. (MLRA 9:2)

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1.Zasluzhennyy deyatel' nauki i tekhniki RSFSR.
(Sugar industry)

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Saturation coefficient is independent of temperature. P. M. Silin (*Sakhar. Prom.*, 1952, No. 3, 19—21; *Sug. Ind. Abstr.*, 1952, **16**, 97).—The linear relation of the saturation coeff. (*a'*) to the non sugar : water ratio (*n*), for values of *n* of 1·8—3, was previously shown (*cf.* *B.*, 1950, 111, 462). It is now shown that when values are calculated from apparent purity data, the graph of *a'* against *n* is a single curve for syrups at all temp. at 40—80°. The usefulness of this curve in sugar boiling control is discussed. [Note. In the previous paper, *n* stood for the ratio non sugars : water, and *Н* for sugar : water ; in the present paper, *Н* (Russian capital "n") is used for the ratio, but *n* is retained in this abstract for continuity and clarity.] P. S. Arup

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SILIN, P.M.

(a) Estimating composition of final massecuite. N. P. Silina. (b) Crystallisation of final massecuite. P. M. Silin (*Sakhar. Prom.*, 1953, No. 9, 14—16, 17—23).—(A) The permissible purity and Brix are derived from the "standard" purity of the molasses, the min. cooling temp., and the max. permissible η of the massecuite, by means of simple equations. Centrifuge makers should indicate the max. permissible η; readings of η should be made standard practice in sugar factories.

(B) Examples based on Silina's equations (cf. Abstr. A) are dis-

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SILIN, P. M.

(2)

C. A. V-48
Jan 10, 1954
Sugar, Starch and Gums

Control of crystallization of a low grade massecuite. P. M. Silin (Technol. Inst. Food Ind., Moscow). *Sakharnaya Prom.* 27, No. 1, 16–18(1953).—Instead of the complicated method for detn. of normal purity of final molasses, S. introduces a table which permits the calcn. of normal purity of final molasses samples that can be taken directly at the centrifugal station. V. B. Baikow

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SILIN, P.M., professor.

Increase in scientific and technical literature on sugar production in Czechoslovakia. Sakh.prom. 27 no.4:42-43 Ap '53. (MLRA 6:6)
(Czechoslovakia--Sugar industry)

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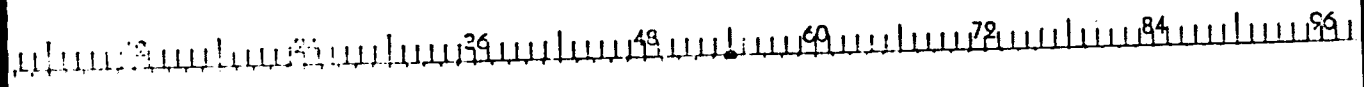
SILIN, P.M.; SILINA, N.P.

True supersaturation in the crystallization of second product fillmass. Sakh.prom. 27 no.6:4-9 Je '53. (MLRA 6:6)

1. Moskovskiy tekhnologicheskiy institut pishchevoy promyshlennosti. (Sugar industry)



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Silin, P. M.

Chemical Abst.
Vol. 48 No. 3
Feb. 10, 1954
Sugar, Starch, and Gums

Viscosity of molasses. P. M. Silin and Z. A. Silina (Moscow Technol. Inst. Food Ind.). *Sakharnaya Prom.* 27, No. 7, 21-7(1953).—Viscosity of molasses prevents crystn. in low-grade massecuites and, therefore, increases sucrose losses. It is advisable to introduce in the lab. control detn. of molasses viscosity. The normal purity and degree Brix of final molasses depend on viscosity and can be calcd. from nomographs shown in this article.
V. E. Baikow

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DRONOV, S.F. [author]; LEPESHKIN, inzhener; SILIN, P., professor [reviewers].

"Dynamic theory of the extraction of sugar from beets by the diffusion method." S.F.Dronov. Reviewed by Lepeshkin, P.Silin. Sakh.prom. 27 no.8:44-47 Ag '53. (MLRA 6:8)

(Sugar industry) (Dronov, S.F.)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550610008-5

Viscosity of molasses. P. M. Silin and Z. A. Silina. *Zuckerind.* 4(79), 159-60(1954). Abridgment in German. See *C.A.* 48, 17196. A. Van Hook

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SILIN, P.M.

Theory of the operation of diffusion apparatus. Sakh.prom. 28 no.7:29-31 '54. (MLRA 8:1)

1. Moskovskiy tekhnologicheskiy institut pishchevoy promyshlennosti.
(Sugar industry) (Diffusers)

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SILIN, P.M.

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USSR • Evaluation and estimation of capacity of diffusion apparatus. P. M. Silin (Technol. Inst. Food Ind., Moscow). *Sakharnaya Prom.* 28, No. 8, 8-11(1954).—An experimentally obtained coeff. can serve as indicator of battery performance. Discussion and formulas are shown.
V. B. Batkow

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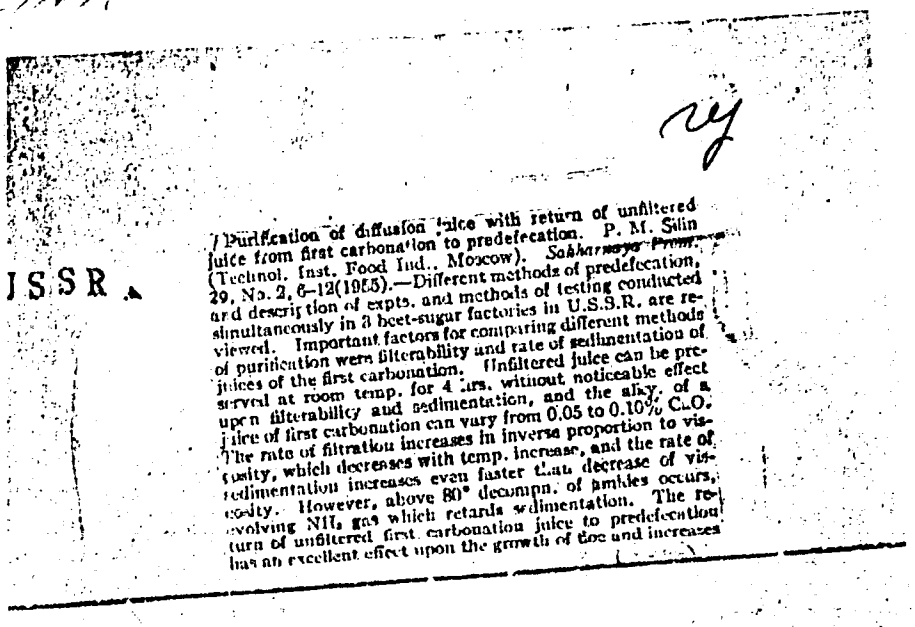
SILIN, P. M.



JSSR

Purification of diffusion juice with return of unfiltered juice from first carbonation to predefecation. P. M. Silin (Technol. Inst. Food Ind., Moscow). *Sakharnaya Prom.* 29, No. 2, 6–12(1955).—Different methods of predefecation, and description of expts. and methods of testing conducted simultaneously in 3 beet-sugar factories in U.S.S.R. are reviewed. Important factors for comparing different methods of purification were filterability and rate of sedimentation of juices of the first carbonation. Unfiltered juice can be preserved at room temp. for 4 hrs. without noticeable effect upon filterability and sedimentation, and the alky. of a juice of first carbonation can vary from 0.05 to 0.10% CaO. The rate of filtration increases in inverse proportion to viscosity, which decreases with temp. increase, and the rate of sedimentation increases even faster than decrease of viscosity. However, above 80° decompn. of amides occurs, evolving NH_3 gas which retards sedimentation. The return of unfiltered first carbonation juice to predefecation has an excellent effect upon the growth of floc and increases

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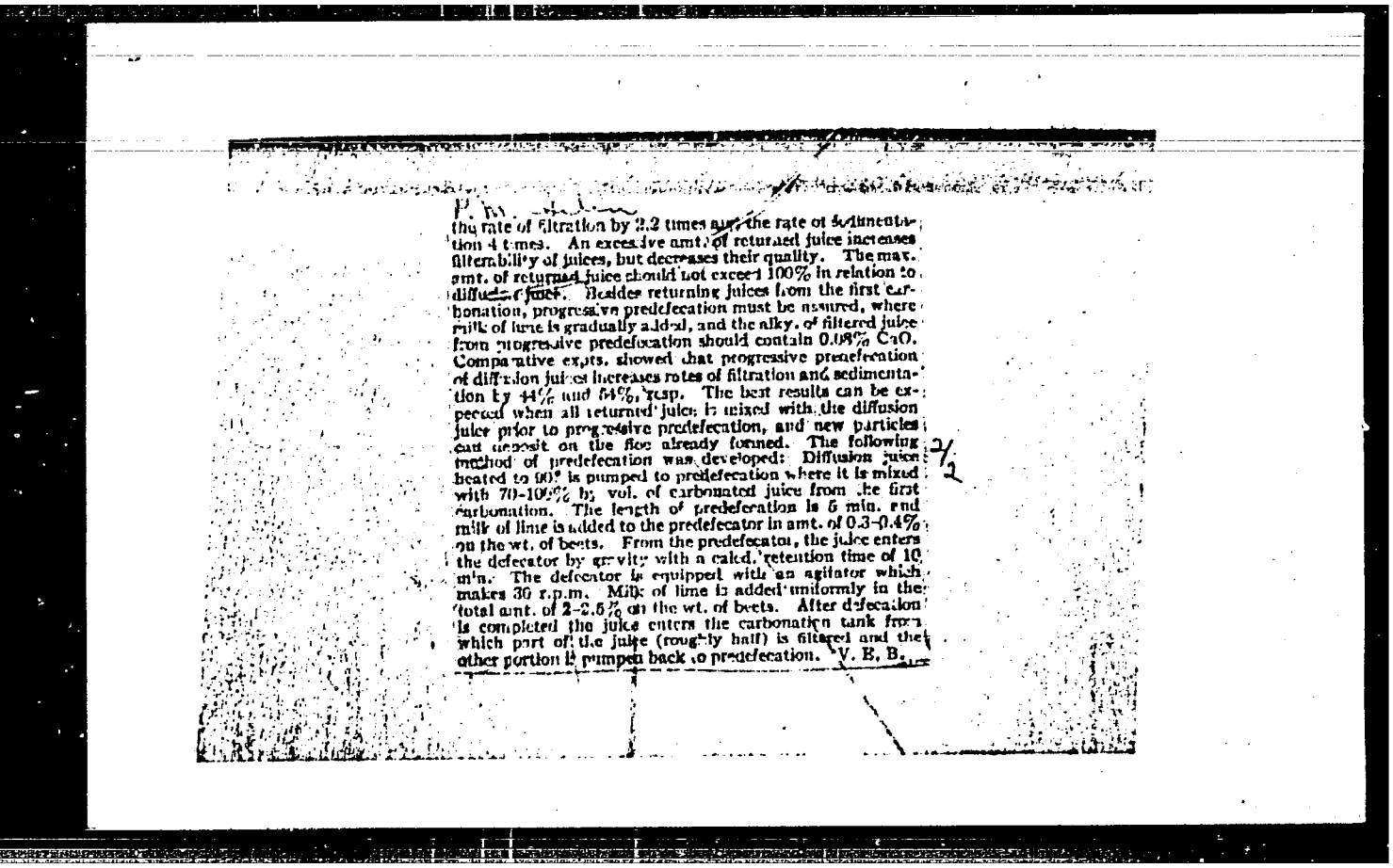

the rate of filtration by 2.2 times and the rate of sedimentation 4 times. An excessive amt. of returned juice increases filterability of juices, but decreases their quality. The max. amt. of returned juice should not exceed 100% in relation to diffusion juice. Besides returning juices from the first carbonation, progressive predefecation must be assured, where milk of lime is gradually added, and the alky. of filtered juice from progressive predefecation should contain 0.08% CaO. Comparative expts. showed that progressive predefecation of diffusion juices increases rates of filtration and sedimentation by 44% and 54%, resp. The best results can be expected when all returned juice is mixed with the diffusion juice prior to progressive predefecation, and new particles can deposit on the floc already formed. The following method of predefecation was developed: Diffusion juice heated to 60° is pumped to predefecation where it is mixed with 70-100% by vol. of carbonated juice from the first carbonation. The length of predefecation is 5 min. and milk of lime is added to the predefecator in amt. of 0.3-0.4% on the wt. of beets. From the predefecator, the juice enters the defecator by gravity with a calcd. retention time of 10 min. The defecator is equipped with an agitator which makes 30 r.p.m. Milk of lime is added uniformly in the total amt. of 2-2.5% on the wt. of beets. After defecation is completed the juice enters the carbonation tank from which part of the juice (roughly half) is filtered and the other portion is pumped back to predefecation. V. B. B.

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SILIN, P.M.

3

Obtaining diffusion juice. P. M. Silin (Technol. Inst. Food Ind., Moscow). *Sakharnaya Promysh.* 29, No. 3, 7–12 (1955). — S. compares his theory and formula of the diffusion process with that of Oplatka, *et al.* (C.A. 45, 10020*d*; 47, 7901*f*) and concludes that Oplatka's formula is almost identical with his own. Formulas and curves are shown.

V. E. Baikow

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Control of the basic technological processes. Sakh.prom.29 no.5: 12-16 '55. (MLRA 8:11)

1. Moskovskiy tekhnologicheskiy institut pishchevoy promyshlennosti (Sugar industry)

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BUDNIKOV, P.; SILIN, P [redacted]

Convention of chemical technologists in Slovakia. Zhur. prikl. khim. 29 no.12:1896-1898 D '56. (MLRA 10:6)
(Banska Stiavnica, Chechoslovakia--Chemistry, Technical--Congresses)

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SILIN, P.M., professor.

Conference on beet growing and sugar manufacture in Prague in 1955. (MLRA 9:7)
Sakh.prom.30 no.3:10-13 Mr '56.
(Prague--Sugar industry--Congresses)

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"Fudamentals of Sugar Production". M.Drakhovskaia, V.Steglik and K. Shandera.Reviewed by P.Silin. Sakh.prom. 30 no.5:78-79 '56. (Sugar industry)(Drakhovskaia, M.)(Steglik,V.)(Shandera,K.)(MLRA 9:9)

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The anniversary of an engineer Doctor A. Mirchev. Sakh.prom. 30 no.7:72 Jl '56. (MLRA 9:11)

(Mirchev, A.)

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New nomogram on the operation of diffusion apparatus and its practical application. Sakh.prom.30 no.11:7-14 N '56. (MLRA 10:2)

1. Moskovskiy tekhnologicheskiy institut pishchevoy promyshlennosti.
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Eliminating production difficulties ("Producing and processing sugar beets without difficulty and losses." Reviewed by P.M. Silin). Sakh.prom.30 no.11:79 N '56. (MLRA 10:2)
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Sixtieth birthday of Academician I. Vashatko. Sakh.prom. 31 no.3:67 Mr '57. (MLRA 10:4)
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1. Moskovskiy tekhnologicheskiy institut pishchevoy promyshlennosti.
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...effect of the composition of water supplied to sugar refineries on technological processes. Sakh.prom. 31 no.7:15-16 Jl '57. (MLRA 10:8)

1. ...skovskiy tekhnologicheskiy institut sakharnoy promyshlennosti.
(Water--analysis) (Sugar industry)

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I.V. Akindinov's simple method for determination of molasses quality. Sakh.prom. 31 no.7:75-76 Jl '57. (MLRA 10:8)
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SILIN, P.M.

Recollections of student days. Sakh. prom. 31 no.11:51-52 N '57.
(MIRA 11:1)

1. Moskovskiy tekhnologicheskiy institut pishchevoy promyshlennosti.
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